Board meeting

Tuesday, September 15, 2026 7:00 PM
Administration Complex, 101 Edgeway Road, Dover, PA 17315

1. **OPENING**

1.A. Pledge of Allegiance

1.B. Roll Call

2. **PRESENTATIONS**

2.A. General Obligation Bond Issuance - Raymond James

3. **COMMUNICATIONS**

3.A. Student Board Representatives Report
- Addison Rotolo
- Salar Asfandyar

4. **PUBLIC COMMENT**

5. **BOARD PRESIDENT'S COMMUNICATION**

5.A. Announcement of Executive Session

6. **ACTION/CONSENT: FIELD TRIPS**

6.A. Field Trip Request, SkillsUSA State Officer Region 1 Summit-Albany, NY- October 8-11, 2026

6.B. Field Trip Request - SkillsUSA Central Region Fall Leadership Conference (State Officer/Conference Officer) at Penn Harris Hotel, Camp Hill, PA -November 9-13, 2026

6.C. Field Trip Request - SkillsUSA Central Region Fall Leadership Conference (Dover chapter officers) at Penn Harris Hotel, Camp Hill, PA - November 11-13, 2026

6.D. Field Trip Request - HS DECA students to attend Sports and Entertainment Marketing Career Day with 76ers at Wells Fargo Center in Philadelphia, PA - *either* November 2, 2026 *or* November 11, 2026.

7. **ACTION/CONSENT: CTE CURRICULUM**

7.A. CTE Curriculum: Accounting Technology

7.B. CTE Curriculum: Agriculture, General

7.C. CTE Curriculum: Agricultural Mechanization

7.D. CTE Curriculum: Business Administration

7.E. CTE Curriculum: AP Business with Personal Finance

7.F. CTE Curriculum: Commercial and Advertising Art

7.G. CTE Curriculum: Computer Technology

7.H. CTE Curriculum: Financial Literacy and Career Exploration

7.I. CTE Curriculum: Horticulture and Landscaping

7.J. CTE Curriculum: Marketing

8. **ACTION/CONSENT: HUMAN RESOURCES**

8.A. Appointments

8.B. Transfers

8.C. Leaves

8.D. Resignations/Terminations

8.E. Retirements

8.F. 2026-2027 Driver Listing

9. **ACTION/CONSENT: MINUTES**

9.A. Minutes of the August 11, 2026 Board Meeting

9.B. Minutes of the August 18, 2026 Board Meeting

10. **ACTION: FINANCE**

10.A. Bills Paid Report

10.B. Treasurer's Report

10.C. YTD Budget to Actual Report

11. **ACTION**

11.A. Appointment of Dr. Timothy Mitzel as Superintendent, effective September 21, 2026 pursuant to the terms and conditions set forth in the attached agreement.

11.B. CTE Obsolete Listing

11.C. 2027 PSBA Officer Election

12. **REPORTS**

12.A. Dover Eagle Foundation Report - Director Hogan

12.B. York Adams Academy (YAA) Report - Director Emig

12.C. York County School of Technology (YCST) Report - Director Conley

12.D. LIU #12/YORK LEARNING CENTER - Director Miller

12.E. Legislative Liaison - Director McKinney

12.F. Dover Industrial & Commercial Development Committee (ICDC) Report - Director Wolverton

12.G. Pennsylvania School Boards Association (PSBA) Report - Director Lluberes

12.H. Superintendent's Report

13. **PUBLIC COMMENT**

14. **MISCELLANEOUS**

14.A. Comments/Observations from Board Members

15. **ADJOURNMENT**

15.A. Future Meeting Announcements

15.B. Adjourn Meeting

FMX # 305572

Dover Area School District

Proposed School Sponsored Field trip

Trips requiring Board approval must be submitted 45 days in advance. All other forms must be submitted at least 10 days in advance.

Teacher/Coordinator Name: Nolan Smith

Group/Grade Level Attending: PA SkillsUSA State Officers # of Students Attending 7 (1 Dover Student)

Title of Event SkillsUSA state officer Region 1 Summit

Location of Trip Albany New York: Hotel TBD

Date(s) of Trip October 8th through 11th 2026 Distance (one way) 316 Miles

Departure/Return Location: Dover Area High School Departure Time: 8:00 AM Return Time 2:30 PM

Transportation 1 (Vans) (Buses) October 8th through 11th 2026 (Date Requested)

Nurse Required (Consult building nurse) ☐ Yes ☑ No

If Yes, is parent accompanying on field trip? ☐ Yes ☐ No

If parent not able to accompany field trip, contact administration building to see if a nurse is available.

Spoke with _____ at Admin Date _____

Substitute Required ☑ Yes ☐ No **If Yes, please list date(s) and enter into AESOP after approved: October 8th and 9th**

Does this trip occur during instruction time? ☑ Yes ☐ No

Is this trip considered optional for students? ☐ Yes ☑ No

Is this trip considered solely co-curricular? ☑ Yes ☐ No

Need Board Approval Checklist		
Overnight Stay	☑ Yes	☐ No
Over 65 Miles one way	☑ Yes	☐ No

Must be submitted 45 days prior to date of field trip

Expense	Amount	# of Students	# of Staff	Total	District Funds	Non-District Funds	Funding Source
Admission	$0.00			$0.00	☐	☐	
Meals/Incidentals for students	$70.00	1		$70.00	☐	☑	SkillsUSA student account
Meals/Incidentals for Advisor	$70.00		1	$70.00	☑	☐	1300-580-000-30-830
Lodging for students	$350.00	1		$350.00	☑	☑	~~Perkins~~ Cont use - out of State
Lodging for Advisor	$464.00		1	$464.00	☑	☐	1300-580-000-30-830
Travel/transportation	$458.20		1	$458.20	☑	☐	1300-519-000-30-830
Substitute fees	$125.00	2 Days 1 Teacher		$250.00	☑	☐	1300-122-000-30-830
Other:	$0.00			$0.00	☐	☐	

Total Trip Cost	$1,662.20	Total District Cost	1592.20 ~~$1,242.20~~

NOTE: Substitutes cost $125 per teacher per day. Vans cost $.725 per mile. Buses cost $110 for the first four hours + $33 per additional hour

Chaperones (Please list chaperones):

Nolan Smith, Roberta Johnson (state advisor), and other state officer advisors

Adult to Student Ratio: A minimum of ONE adult chaperone per 1 Students

☑ **I understand the District requires anyone traveling on this trip who is not a current DASD student to have proper criminal, child abuse clearances and FBI clearances. Said clearances must be submitted to the approving principal at least seventy-two (72) hours prior to the date of the trip.**

Coordinating Teacher/Advisor Signature — Date 8/17/26

Administrative Approval		
Principal Approval Signature	Date 8/19/26	☑ Approved ☐ Denied
Assistant Superintendent Approval Signature	Date 8/21/2026	☑ Approved ☐ Denied
Transportation Approval Signature (if requesting district transportation)	Date	☐ Approved ☐ Denied
Board Approval (if Required)	Date	☐ Approved ☐ Denied

1 Please write the specific course objective and/or standard to which the field trip applies:

Students will develop leadership, communication, teamwork, and collaboration skills by participating in the SkillsUSA Region 1 Summit with state officers from across the region. Students will work collaboratively with other state officers, share ideas and experiences, and learn how SkillsUSA programs and leadership activities are implemented in different states. This experience supports course standards related to leadership development, professional communication, teamwork, problem-solving, and workplace readiness.

2 Briefly describe activities or attach activity guide sheets that students will be doing during this field trip.

Students will attend several sessions covering topics that will help them develop workplace and leadership skills. In addition, Student will network and work with other student in our region to

that have similar interests and goals ultimately focused on building our PA SkillsUSA chapters.

3 How will you evaluate the degree to which students have mastered the course objective or standard in #1. List any applicable follow-up activities planned.

State officers will use the skills they acquire at this training to build our state program and to development workshops to implement at our PA skillsUSA state conference. This Summit is a requirement of being a State officer.

FMX # 305573

Dover Area School District
Proposed School Sponsored Field trip

Trips requiring Board approval must be submitted 45 days in advance. All other forms must be submitted at least 10 days in advance.

Teacher/Coordinator Name: Nolan Smith

Group/Grade Level Attending: SkillsUSA State officer/Conference officer # of Students Attending 1

Title of Event SkillsUSA Central Region Fall Leadership Conference

Location of Trip Penn Harris Hotel 1150 Camp Hill Byp Camp Hill, PA 17011

Date(s) of Trip November 9th and 13th 2026 Distance (one way) 23 Miles

Departure/Return Location: Dover Area High School Departure Time: 8:00 AM Return Time 2:30 PM

Transportation 1 (Vans) (Buses) November 9th through 13th (Date Requested)

Nurse Required (Consult building nurse) ☐ Yes ☑ No

If Yes, is parent accompanying on field trip? ☐ Yes ☐ No

If parent not able to accompany field trip, contact administration building to see if a nurse is available.

Spoke with _____ at Admin Date _____

Substitute Required ☑ Yes ☐ No **If Yes, please list date(s) and enter into AESOP after approved: November 9,10,11,12,13 2026**

Does this trip occur during instruction time? ☑ Yes ☐ No

Is this trip considered optional for students? ☑ Yes ☐ No

Is this trip considered solely co-curricular? ☑ Yes ☐ No

Need Board Approval Checklist		
Overnight Stay	☑ Yes	☐ No
Over 65 Miles one way	☐ Yes	☑ No

Must be submitted 45 days prior to date of field trip

Expense	Amount	# of Students	# of Staff	Total	District Funds	Non-District Funds	Funding Source
Admission	$400.00	1		$400.00	☐	☑	Perkins
Meals/Incidentals				$0.00	☐	☐	Included with admission
Lodging				$0.00	☐	☐	Included with admission
Travel/transportation	$32.35		1	$32.35	☑	☐	1300-519-000-30-830
Substitute fees	$125.00		5 days/ 1 Teacher	$625.00	☑	☐	1300-122-000-30-830
Other: Advisor cost for admission, lodging, and Meals	$849.00		1	$849.00	☑	☐	1300-580-000-30-830

Total Trip Cost	$1,906.35	Total District Cost	$1,506.35

NOTE: Substitutes cost $125 per teacher per day. Vans cost $.725 per mile. Buses cost $110 for the first four hours + $33 per additional hour

Chaperones (Please list chaperones):

Nolan Smith and advisors from other schools with conference officers

Adult to Student Ratio: A minimum of ONE adult chaperone per 1 Students

☑ **I understand the District requires anyone traveling on this trip who is not a current DASD student to have proper criminal, child abuse clearances and FBI clearances. Said clearances must be submitted to the approving principal at least seventy-two (72) hours prior to the date of the trip.**

Nolan Smith 8/18/26

Coordinating Teacher/Advisor Signature Date

Administrative Approval		
Principal Approval Signature	Date 8/19/26	☑ Approved ☐ Denied
Assistant Superintendent Approval Signature	Date 8/20/2026	☑ Approved ☐ Denied
	Date	☐ Approved ☐ Denied
Transportation Approval Signature (if requesting district transportation)	Date	☐ Approved ☐ Denied
Board Approval (if Required)	Date	

1 Please write the specific course objective and/or standard to which the field trip applies:

This conference is essential for our leadership in participation in SkillsUSA and is required for all state officers and central region confernce officers. During this trip students will plan workshop and activities to teach other skillsUSA members in central region valuable leadership skills needed for the workforce. Students will gain valuable leadership skills associated to our program of study task list along with collaboration among other SkillsUSA members across central PA.

2 Briefly describe activities or attach activity guide sheets that students will be doing during this field trip.

The state officers and conference officers will lead several sessions covering topics that will help others develop workplace and leadership skills. In addition, Student will network and work with other student in our region to that have similar interests and goals ultimately focused on building our local SkillsUSA chapters.

3 How will you evaluate the degree to which students have mastered the course objective or standard in #1. List any applicable follow-up activities planned.

Student will share what they learn with the member of our DAHS SkillsUSA chapter. They will also use and apply what they learn from this conference in their everyday practice within their individual program of study as well as in life outside of school.

FMx # 305575

Dover Area School District

Proposed School Sponsored Field trip

Trips requiring Board approval must be submitted 45 days in advance. All other forms must be submitted at least 10 days in advance.

Teacher/Coordinator Name: Ashley Shoemaker

Group/Grade Level Attending: SkillsUSA Dover chapter officers # of Students Attending 6

Title of Event SkillsUSA Central Region Fall Leadership Conference

Location of Trip Penn Harris Hotel 1150 Camp Hill Byp Camp Hill, PA 17011

Date(s) of Trip November 11th-13th 2026 Distance (one way) 23 Miles

Departure/Return Location: Dover Area High School Departure Time: 8:00 AM Return Time 2:30 PM

Transportation 1 (Vans) ____ (Buses) November 11th through 13th (Date Requested)

Nurse Required (Consult building nurse) ☐ Yes ☑ No

If Yes, is parent accompanying on field trip? ☐ Yes ☐ No

If parent not able to accompany field trip, contact administration building to see if a nurse is available.

Spoke with _____ at Admin Date _____

Substitute Required ☑ Yes ☐ No **If Yes, please list date(s) and enter into AESOP after approved; November 11, 12, and 13, 2026**

Does this trip occur during instruction time? ☑ Yes ☐ No

Is this trip considered optional for students? ☑ Yes ☐ No

Is this trip considered solely co-curricular? ☑ Yes ☐ No

Need Board Approval Checklist		
Overnight Stay	☑ Yes	☐ No
Over 65 Miles one way	☐ Yes	☑ No

Must be submitted 45 days prior to date of field trip

Expense	Amount	# of Students	# of Staff	Total	District Funds	Non-District Funds	Funding Source
Admission	$400.00	6		$2,400.00	☐	☑	Perkins and SkillsUSA
Meals/Incidentals				$0.00	☐	☐	Included with admission
Lodging				$0.00	☐	☐	Included with admission
Travel/transportation	$32.35		1	$32.35	☑	☐	1300-519-000-30-830
Substitute fees	$125.00		3 days/ 1 teacher	$375.00	☑	☐	1300-122-000-30-830
Other: Advisor cost for admission, lodging, and Meals	$569.00		1	$569.00	☑	☐	1300-580-000-30-830

Total Trip Cost	$3,376.35	Total District Cost	$976.35

NOTE: Substitutes cost $125 per teacher per day. Vans cost $.725 per mile. Buses cost $110 for the first four hours + $33 per additional hour

Chaperones (Please list chaperones):

Nolan Smith and Ashley Lucabaugh

Adult to Student Ratio: A minimum of ONE adult chaperone per 3 Students

☑ **I understand the District requires anyone traveling on this trip who is not a current DASD student to have proper criminal, child abuse clearances and FBI clearances. Said clearances must be submitted to the approving principal at least seventy-two (72) hours prior to the date of the trip.**

Coordinating Teacher/Advisor Signature — 8/18/26 Date

Administrative Approval		
Principal Approval Signature	8/19/26 Date	☑ Approved ☐ Denied
Assistant Superintendent Approval Signature	8/21/2026 Date	☑ Approved ☐ Denied
Transportation Approval Signature (if requesting district transportation)	Date	☐ Approved ☐ Denied
Board Approval (if Required)	Date	☐ Approved ☐ Denied

1 Please write the specific course objective and/or standard to which the field trip applies:

This conference is essential for our leadership in participation in SkillsUSA. Students will gain valuable leadership skills associated to our program of study task list along with collaboration among other SkillsUSA members across central PA.

2 Briefly describe activities or attach activity guide sheets that students will be doing during this field trip.

Students will attend several sessions covering topics that will help them develop workplace and leadership skills. In addition, Student will network and work with other student in our region to that have similar interests and goals ultimately focused on building our local SkillsUSA chapters.

3 How will you evaluate the degree to which students have mastered the course objective or standard in #1. List any applicable follow-up activities planned.

Student will share what they learn with the member of our DAHS SkillsUSA chapter. They will also use and apply what they learn from this conference in their everyday practice within their individual program of study as well as in life outside of school.

11/2 = #306904

11/11 = # 306905

Dover Area School District

Proposed School Sponsored Field trip

Trips requiring Board approval must be submitted 45 days in advance. All other forms must be submitted at least 10 days in advance.

Teacher/Coordinator Name: Melissa Ural & Jaimie Russo

Group/Grade Level Attending: Dover DECA — # of Students Attending: 50

Title of Event: Sports & Entertainment Marketing Career Day with 76er's

Location of Trip: Wells Fargo Center 3601 S. Broad Street Philadelphia, PA 19148 (Philadelphia 76ers - Wells Fargo Center)

Date(s) of Trip: November 2nd or November 11th — Distance (one way): 115 Miles

Departure/Return Location: Dover Area High School — Departure Time: 10:00 AM — Return Time: 11:30 PM

Transportation: ____ Vans; ____ Buses; 1 TBD Date Requested

Nurse Required (Consult building nurse): ☐ Yes ☑ No

If Yes, is parent accompanying on field trip? ☐ Yes ☑ No

If parent not able to accompany field trip, contact administration building to see if a nurse is available.

Spoke with N/A at Admin — Date N/A

Substitute Required: ☑ Yes ☐ No — **If Yes, please list date(s) and enter into AESOP after approved.** 2

Does this trip occur during instruction time? ☑ Yes ☐ No

Is this trip considered optional for students? ☑ Yes ☐ No

Is this trip considered solely co-curricular? ☐ Yes ☑ No

Need Board Approval Checklist		
Overnight Stay	☐ Yes	☑ No
Over 65 Miles one way	☑ Yes	☐ No

Must be submitted 45 days prior to date of field trip

Expense	Amount	# of Students	# of Staff	Total	District Funds	Budgeted	Non-District Funds	Funding Source
Admission	$50.00	48	2	$2,500.00	☑	☐	☑	Deca students $2400 → $1000 (1300-810-30-0830)
Meals/Incidentials				$0.00	☐	☐	☐	
Lodging				$0.00	☐	☐	☐	
Travel/transportation	447.50			447.50	☑	☑	☐	District budget- 1300-519-000-30-830
Substitute fees	$125.00		2	$250.00	☑	☑	☐	District budget- 1300-519-000-30-830
Other: Ticket for show				$0.00	☐	☐	☐	
Other				$0.00	☐	☐	☐	

Total Trip Cost $3,197.50 — **Total District Cost** $697.50

Chaperones (Please list chaperones)

Melissa Ural & Jaimie Russo

Adult to Student Ratio: A minimum of ONE adult chaperone per 25 Students

☑ **I understand the District requires anyone traveling on this trip who is not a current DASD student to have proper criminal, child abuse clearances and FBI clearances. Said clearances must be submitted to the approving principal at least seventy-two (72) hours prior to the date of the trip.**

Melissa K Ural — Coordinating Teacher/Advisor Signature — Date: 9/3/26

Administrative Approval		☑ Approved ☐ Denied
Principal Approval Signature	Date: 9/9/26	
Timothy M	Date: 9/10/2026	☑ Approved ☐ Denied
Assistant Superintendent Approval Signature	Date	☐ Approved ☐ Denied
Transportation Approval Signature (if requesting district transportation)	Date	☐ Approved ☐ Denied
Board Approval (if Required)	Date	

1 Please write the specific course objective and/or standard to which the field trip applies.

Exploring Career Development Opportunities
- Research career and educational opportunities in Marketing & Business
- Demonstrate and practice networking skills

Role play scenario will be given to students to work through with other DECA members

2 Briefly describe activities or attach activity guide sheets that students will be doing during this field trip.

Depart DHS on district school bus Arrive at Wells Fargo Center Role Play led by Sixers Executives Scholarship Awards/Foul Shot Contest Career Workshop & Panel on Court Lincoln Financial Tour (Eagles) DECA Group Night Out (watch warm-ups) Dinner on own in Wells Fargo Center 76ers Game Depart Wells Fargo Center (we do not stay for the entire game) Return to Dover High School	

3 How will you evaluate the degree to which students have mastered the course objective or standard in #1. List any applicable follow-up activities planned

Following the field trip, participating DECA students will participate in a discussion and reflection activity	

Cover Sheet

Dover Area School District
Curriculum Cover Sheet

CIP Code: 52.0302

CIP Title: Accounting Technology

Planned Hours: 980

CIP Description:

A program that prepares individuals to provide technical administrative support to professional accountants and other financial management personnel. Includes instruction in posting transactions to accounts, record-keeping systems, accounting software operation, and general accounting principles and practices.

Component Courses:

610 - Financial and Career Explorations (120 hours)

This course consists of two main components: Financial Literacy and Career Explorations. The Financial Literacy component is designed for students to build a strong foundation of personal financial skills to assist in preparation for adulthood. Emphasis will be placed on the following: managing personal spending to meet financial goals, understanding and controlling the use of credit and debt, developing an awareness of the impact of education on earning potential, exploring how money can work for us through saving and investing, using financial services, and the protection of assets through risk management. Students will use real-world examples and take part in activities including goal writing, personal budgets, investing simulations, and checking and savings account applications. The career portion of the class emphasizes the Pennsylvania Academic Standards for Career Education and Work. The class will provide students with the opportunity to begin or continue their examination into the future beyond high school. Students will have the opportunity to identify their personal aptitudes, abilities, and interests and connect those to possible career placements. Satisfactory completion of Smart Futures activities 1, 2, 3, 6, 7, 12, 14, and 15 is required to earn the credit for the course.

631- Accounting I (120 hours)

Students are taught basic double-entry accounting principles as an overall background to business organization and operations for vocational and personal use. Emphasis is placed on the principles and methods of recording business transactions and the preparation of financial

statements for sole proprietorship and service businesses. The course is highly recommended for students planning on majoring in business at college.

641- Accounting II (120 hours)

College in the High School Course

REQUIRED: SUCCESSFUL COMPLETION OF ACCOUNTING I

Students are given a review of the fundamental principles of double-entry bookkeeping. Emphasis is placed on the accounting cycle for merchandising corporations, including sales, purchases, and financial statements for corporations. This class will provide students with the foundation skills necessary for entry-level employment in business and for building a career in accounting and or finance. This is a **College in the High School** course offered through an articulation agreement with Thaddeus Stevens.

645 - AP Business with Personal Finance (120 hours)

AP Business with Personal Finance is a college-level course that introduces students to core business concepts—including entrepreneurship, marketing, management, accounting, and finance—while building essential personal financial literacy skills. Students learn how businesses identify customer needs, compete in markets, make strategic and ethical decisions, and manage operations using real-world case studies and project-based learning. Satisfactory completion of Smart Futures activities 1, 2, 3, 6, 7, 12, 14, and 15 is required to earn the credit for the course. The course also equips students with practical financial skills such as budgeting, saving, borrowing, managing risk, and investing for long-term goals. Major projects include developing a new product through a Business Canvas Project and completing a Financial Advisor Project.

651 - Accounting III (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF ACCOUNTING II

Students are given a review of the principles of Accounting I and II. Students are introduced to using an electronic accounting method by using QuickBooks software. The class offers fully integrated computer activities to reinforce accounting instruction. Emphasis is placed on accounting for special procedures and accounting for payroll systems. This class will provide students with the foundation skills necessary for entry-level employment in business and for building a career in accounting and/or finance.

652 - Business Law (120 hours)

Dover Area School District
Curriculum Cover Sheet

Students will explore the foundations of business law as well as the application of legal concepts. Topics include contracts, the law of sales, property law, agency and employment law, legal forms of business organization, borrowing money, and paying bills.

660 - Microsoft Office (120 hours)

Microsoft Office is a comprehensive course designed to teach students intermediate-level software applications using Microsoft Office. This course includes Word, Excel, PowerPoint, and the Internet. In addition, students will complete integrated projects and internet research tasks. Students will have the opportunity to earn a Microsoft Office Specialist credential through Certiport. These software application skills benefit students in all areas of life.

661- Management & Leadership (120 hours)

College in the High School Course

Are you a leader or aspiring leader in our school? Do you want to improve your leadership abilities? The Management & Leadership course introduces students to key leadership and ethical knowledge and skills, including integrity, trust, accountability, transparency, fairness, and respect. Students will use real-world situations to help strengthen their leadership and ethical decision-making skills through the planning, implementation, and evaluation of a class service-learning project. Students may opt to receive college credit for this course through an articulation agreement with York College.

662 - Advanced Microsoft Office (120 hours)

Advanced Microsoft Office is a comprehensive course designed to teach students ***advanced-level*** applications in ***Microsoft Office.*** Students will have the opportunity to utilize and develop broader skills learned in Microsoft Office. Emphasis is placed on the following advanced applications: Word, PowerPoint, and Excel. Internet search strategies will be used to gather/collect information from websites to create and enhance student projects. Priority will focus on the integration of software packages and student application projects. Skills learned in the advanced course will benefit students in their academic, personal, and business lives.

Pacing Guide

PACING GUIDE

610 - Financial and Career Explorations or 645 AP	**Associated Tasks**	**120 Hours**
Unit 1: Financial Goals & Money Management Tools	101, 108, 206, 905	12
Unit 2: Income	206, 404-407, 601, 905	23
Unit 3: Spending & Credit	206, 303, 308, 314, 601, 905	19
Unit 4: Saving & Investing	206, 905	18
Unit 5: Risk & Insurance	N/A	11
Unit 7: Career Acquisition & Preparation	N/A	18
Unit 8: Career Retention & Advancement	N/A	19

631- Accounting I	**Associated Tasks**	**120 Hours**
Unit 1: Introduction to the Role of Accounting in Business	901, 902, 903, 904, 905, 906, 907	16
Unit 2: Understanding and Recording Transactions	201, 202, 203, 204	40
Unit 3: Posting to the General Ledger	205	18
Unit 4: The Six-Column Worksheet	206, 601, 608	10
Unit 5: Key Financial Statements	208, 209	10
Unit 6: Complete Accounting Cycle for a Sole Proprietorship	207, 210	18
Unit 7: Cash Control & Banking	310, 311	8

PACING GUIDE

641- Accounting II	**Associated Tasks**	**120 Hours**
Unit 1: Payroll Accounting	317: 401, 402, 403, 404, 405, 407, 408, 409, 410	28
Unit 2: Special Journals: Sales and Cash Receipts	205, 303, 304,305, 306, 307, 308, 309, 313, 320, 321	50
Unit 3: Adjustments and the ten-column worksheet	207	10
Unit 4: Corporate Financial Statements	101, 205, 207, 315, 501, 502, 503	32

651 - Accounting III	**Associated Tasks**	**120 Hours**
Unit 1: Cash Funds.	904, 905, 906	10
Unit 2: Plant Assets and Depreciation	901,902, 903, 907	11
Unit 3: Uncollectible Accounts Receivable	201	10
Unit 4: Inventories	202	12
Unit 5: Notes Payable and Receivable	203	10
PROJECT: Complete Accounting Cycle for a Merchandising Corporation	204	12
Unit 6: Introduction to Partnership	205	10
Unit 7: Financial Statements and Liquidation of a Partnership	201, 202, 203, 204, 205	11
PROJECT: Complete the Accounting Cycle for a Partnership	Accounting: 206, 601, 608	12
Unit 8: Ethics in Accounting	208, 209	12
NOCTI Prep	All above, plus 207, 210	10

PACING GUIDE

652 - Business Law	**Associated Tasks**	**120 Hours**
Unit 1: Laws and Their Ethical Foundation	701	6
Unit 2: Constitutional Rights & the Court System	702, 703	19
Unit 3: Civil Law and Procedure	704	7
Unit 4: Contracts	705	20
Unit 5: Ownership and Risk of Loss in Sales	706	4
Unit 6: Consumer Protection	707	7
Unit 7: Real Property Laws	706	16
Unit 8: Insurance, Trusts, and Estates	N/A	8
Unit 9: Employment Law	708	8
Unit 10: Legal Business Structures	707, 709	15
Unit 11: Credit	N/A	10

660 - Microsoft Office	**Associated Tasks**	**120 Hours**
Unit 1: Hardware & the Internet	101, 108	8 hours
Unit 2: Word - Flyers, Letters, and Reports	101, 102, 108, 801, 802, 803	42 hours
Unit 3: Excel - Spreadsheets with Formulas and Charts	101, 102, 108, 201, 208, 601, 602, 604, 606, 607, 804	42 hours
Unit 4: PowerPoint - Presentations with Themes and Graphics	101, 102, 108, 805	30 hours
Unit 5: Introduction to Simple Databases	101, 102, 108	8 hours

PACING GUIDE

661- Management & Leadership	**Associated Tasks**	**120 Hours**
Unit 1- Course Policies, Expectations, and Procedures	N/A	11 hours
Unit 2 - Planning & Organizing	606, 901	30 hours
Unit 3 - Organizational Culture and Managing in a Global Environment	706.709, 901, 902, 903	14 hours
Unit 4 - Staffing & Directing	904, 905, 906	35 hours
Unit 5 - Customer Service	905, 906	10 hours
Unit 6 - Leading	906	20 hours

662 - Advanced Microsoft Office	**Associated Tasks**	**120 Hours**
Unit 1: Word - Watermarking, Forms, Merge, Templates	101, 102, 108, 801, 802, 803	30 hours
Unit 2: Excel - Spreadsheets with Advanced Formulas	101, 102, 108, 201, 208, 601, 602, 604, 606, 607, 804	40 hours hours
Unit 3: PowerPoint - Presentations with Embedded Elements	101, 102, 108, 805	25 hours
Unit 4: Databases & Forms	101, 102, 108	25 hours

Task List (Update from KUD Spreadsheet)

Competency Task List – Secondary Component

Accounting Technology/Technician & Bookkeeping CIP 52.0302

High School Graduation Years 2026, 2027, 2028

100 Perform General Office Duties

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
101	Organize, preserve, and retrieve financial records, reports, and files.	All Classes	Businesses must maintain records for informational and legal purposes.	Maintain and manage financial records, reports or files. Records may be digital or hard copy.	Maintain and manage financial records, reports, and files. Demonstrate knowledge of record-keeping practices.	Task List Management File Structure Creation
102	Conduct office communication, e.g., written, verbal, virtual.	All Classes	Professional, clear communication is critical to all organizations.	How to convey information clearly and professionally, in a manner appropriate to the information being shared.	Create authentic and practice communication pieces that convey information clearly.	Resume & Cover Letter Project Practice Documents Presentations & Projects
103	RESERVED	-				
104	RESERVED	-				
105	RESERVED	-				
106	Follow grammar, punctuation, and spelling rules for the language being used.	All Classes	Professional, clear communication is critical to all organizations.	How to use grammar and terminology appropriate to the task and industry.	Create authentic and practice communication pieces attending grammar	Resume & Cover Letter Project Practice Documents Presentations &

					and industry conventions.	Projects
107	RESERVED	-				
108	Operate a calculator and computer.	All Classes	Calculators and computers simplify a variety of tasks, and each machine has different uses.	The limitations and capabilities of both computers and calculators.	Use office machines appropriate to the task for a variety of classroom projects.	Resume & Cover Letter Project Practice Documents Presentations & Projects Accounting Mini Sets
109	RESERVED	-				
110	RESERVED	-				
111	RESERVED	-				

200 Complete the Steps of the Accounting Cycle

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
201	Prepare a chart of accounts and assign account numbers.	Accounting 1-3	Know the accounting equation. Any item of property has at least one financial claim against it. Owner's equity is changed by revenue, expenses and withdrawals	How to apply the accounting equation to a variety of transactions.	Show how businesses use accounts Demonstrate the effects of transactions on the accounting equation. Set up Accounting records for a sole proprietorship Analyze business transactions Record transactions in the general journal	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

					Post to the general ledger Prepare a trial balance	
202	Use T-accounts to analyze transactions into debit and credit parts.	Accounting 1-3	Accountants analyze transactions into debit and credit parts. The double entry accounting system recognizes the different sides of business transactions as debit and credit.	A business's transactions can be analyzed by using the double entry accounting system, which recognizes the different sides of business transactions as debit and credit	Use T accounts to analyze transactions that affect assets, liabilities and the owner's capital account	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
203	Analyze the effects of transactions using the accounting equation.	Accounting 1-3	Transactions affect revenue, expenses, and withdrawals. Temporary accounts show the changes in owner's equity during each accounting period. Revenues, expenses and withdrawals are temporary accounts and start each new accounting period with zero balances. Double entry accounting requires that total debit and total credits are always equal.	Revenues, expenses and withdrawals are temporary accounts. They start each new accounting period with zero balances. Double entry accounting requires that total debit and total credits are always equal	List and apply the rules of debit and credit for revenue, expenses, and withdrawals accounts	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

204	Analyze and journalize source documents using double-entry accounting.	Accounting 1-3	Every transaction you have with a business is documented in some way. Companies keep permanent records of transactions. The accounting cycle is a series of steps done in each accounting period to keep records in an orderly fashion. You can use the general journal to record all of the transactions of a business	The accounting cycle is a series of steps done in each accounting period to keep records in an orderly fashion. You can use the general journal to record all of the transactions of a business	Explain the purpose of journalizing Apply information from source documents	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
205	Post transactions from general and special journals to ledger accounts.	Accounting 1-3	Journal entries must be posted to special or general ledger accounts. Up to date account balances provide information for reports used by people both inside and outside the businesses. The general journal is a permanent record organized by account number. Posting is the process of transferring information from the	The general journal is a permanent record organized by account number. Posting is the process of transferring information from the journal to individual accounts in the ledger. The trial balance is a proof that the total debits equal total credits in the ledger.	Post general journal entries Prepare a trial balance	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

			journal to individual accounts in the ledger. The trial balance is a proof that the total debits equal total credits in the ledger.			
206	Complete multi-column worksheets.	Accounting I Financial & Career Exploration Microsoft Office Advanced Microsoft Office	The six column worksheet is used to complete the final steps of the accounting cycle. The worksheet organized general ledger account information for the financial statements. It is used to determine net income or net loss for the accounting period	The worksheet organized general ledger account information for the financial statements. After completing the worksheet, you will know the net income or net loss for the accounting period	Prepare a six column worksheet	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
207	Record and post adjusting and closing entries.	Accounting 1-3	Not all financial changes are caused by transactions with other businesses or individual. Some changes occur with a business. Adjustments transfer the cost of 'used up' assets to expenses accounts. Adjustments for changes in	How to record and post adjusting and closing entries.	Determine which general ledger accounts to adjust Calculate the adjustments	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

			merchandise inventory are made directly to the income summary account			
208	Prepare financial statements, e.g., income statement, statement of equity, balance sheet, statement of cash flow.	Accounting 1-3	Financial statements provide essential information for making sound decisions. The income statement reports the net income or net loss. The statement of changes shows the changes in financial interest during the accounting period. The balance sheet reports the financial position at a specific point in time. The statement of cash flows reports, the sources and uses of cash during the accounting period	The income statement reports the net income or net loss. The statement of changes shows the changes in financial interest during the accounting period. The balance sheet reports the financial position at a specific point in time. The statement of cash flows reports, the sources and uses of cash during the accounting period	Prepare a statement of changes in owner's equity Explain the purpose of the balance sheet	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
209	Verify financial statements against the worksheet.	Accounting 1-3	Financial statements must match the information generated with the multicolumn worksheet.	Financial statements must be true and accurate representations of a company's internal accounts.	Prepare a statement of changes in owner's equity Explain the purpose of the balance sheet	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

210	Prepare post-closing trial balance from general ledger.	Accounting 1-3	For accounting purpose the life of a business is divided into specific periods of time. . Closing entries transfer the temporary account balances to the owner's capital account. After the closing entries are posted, a post closing trial balance is prepared to verify that debits equal credits	Closing entries transfer the temporary account balances to the owner's capital account. After the closing entries are posted, a post closing trial balance is prepared to verify that debits equal credits	Post the closing entries to the general ledger Prepare a post closing trial balance	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
211	Apply generally accepted accounting principles throughout the accounting cycle.	Accounting 1-3	Generally accepted accounting principles relevant to a variety of organizations.	All organizations use generally accepted accounting principles in order to create accurate and comparable information for use inside and outside the business.	Use generally accepted accounting principles throughout projects in all courses.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

300 Review and Analyze Financial Documentation

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
301	RESERVED	-				
302	RESERVED	-				

303	Analyze purchase invoice and payment terms.	Accounting 2-3	Processing invoices accurately ensures funds are dispersed properly and promptly. Payment terms dictate timing of payment to suppliers.	How to review and analyze purchase invoice and payment terms.	Review and analyze purchase invoice and payment terms	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
304	Analyze sales invoice and payment terms.	Accounting 2-3	Businesses keep a subsidiary ledger of individual customer accounts. Companies must understand what they've sold, how much revenue it will create, and when that revenue will be realized.	Understand how to read and recognize payment terms and the various methods for recording sales invoices.	Analyze transactions relating to the sale of merchandise and services.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
305	Analyze purchase returns and allowances using debit memos.	Accounting 2-3	When a company returns items it has purchased, purchases are reversed. Businesses sometimes provide allowances to customers for a variety of reasons. These activities impact accounting records.	How to review and analyze purchase returns and allowances using debit memos.	Analyze transactions related to purchase returns and allowances.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

306	Analyze sales returns and allowances using credit memos.	Accounting 2-3	When merchandise is returned, sales are reversed. Businesses sometimes provide allowances to customers for a variety of reasons. These activities impact accounting records.	How to review and analyze sales returns and allowances using credit memos.	Analyze transactions related to sales returns and allowances.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
307	Analyze a batch report or calculator tape.	Accounting 2-3	Batch reports and calculator tape provide information about multiple transactions that must be entered into general, subsidiary, or special ledgers.	How to review batch reports and calculator tape and apply them to the appropriate accounting record.	Review and analyze batch reports or calculator tape.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
308	Analyze shipping terms and documents.	Accounting 2-3	Shipping terms and documents provide crucial information about the timing of goods and expenses/income. Accounting records may be impacted by some decisions related to the logistics of moving goods from place to place.	Understand how shipping terms and documents impact accounting records.	Analyze shipping terms and documents for application to accounting records.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

309	Analyze a memorandum.	Accounting 1-3	Memorandums provide additional information about a transaction that accounts may need to record it correctly.	How to review and analyze a memorandum	Analyze memorandums to determine impact on the accounting records.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
310	Analyze a bank deposit slip.	Accounting I-3 Financial & Career Exploration	Cash control and banking activities. Banking tasks are basic practices in business and in your personal life. All bank deposits are recorded on a deposit slip.	Understand how to use and read a deposit slip.	Prepare bank deposits.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
311	Prepare and review bank reconciliation, including all service charges and fees.	Accounting I-3 Financial & Career Exploration	Internal controls are steps taken to protect assets and keep reliable records. The bank reconciliation is an important internal control to ensure records match reality.	Bank reconciliation should match with accounting records.	Reconcile a bank statement	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
312	Prepare a petty cash report.	Accounting 2-3	Businesses keep petty cash on hand for small, emergent expenses. Petty cash is accounted for with a petty cash report.	How to record the use of petty cash with a petty cash report.	Create a petty cash report.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

313	Analyze cash receipts and disbursements of cash.	Accounting 2-3	The cash receipts journal is used to record the cash a business receives. Disbursements of cash must also be recorded.	How to review and analyze cash receipts or and disbursements of cash.	Post from the sales and cash receipts journals to customer accounts in the accounts receivable subsidiary ledger Foot, prove, total, and rule the sales and cash receipts journal	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
314	Analyze checks and checkbook register.	Accounting I-3 Financial & Career Exploration	Businesses and individuals use checks to improve tracking of receipts and payments.	How to analyze checks and a checkbook register.	Analyze checks and a checkbook register.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies Personal Finance Mock Checkbook
315	Calculate the cost of goods sold using various costing methods.	Accounting 2-3	Businesses calculate the cost of goods sold using a variety of methods, each with its own advantages and disadvantages.	How to prepare an Inventory Stock Record using various costing methods.	Prepare an Inventory Stock Record using various costing methods.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
316	Calculate depreciation using various methods.	Accounting 3	Depreciation is the value an asset loses over time. There are a variety of depreciation methods to choose from based on the asset and tax considerations.	How to calculate depreciation for a variety of assets.	Calculate depreciation for a variety of assets.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

317	RESERVED	-				
318	Analyze promissory notes.	Accounting 3	Promissory notes represent an asset to the company, as it is owed money in the future.	How to read and analyze a promissory note.	Read and analyze a promissory note.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
319	Apply internal controls, auditing, and error-correcting techniques.	Accounting 2-3	Internal controls reduce the likelihood of careless or dishonest errors. All organizations must have internal controls to ensure accurate and acceptable uses of funds.	How companies can implement internal controls.	Create an internal control process for a real or fictitious organization.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
320	Prepare schedules of accounts payable and accounts receivable.	Accounting 2-3	Schedules of accounts payable and accounts receivable detail outstanding assets and liabilities.	Having a schedule of accounts payable and accounts receivable ensures timely collection of money owed and timely payment of bills.	Generate a schedule of accounts payable and accounts receivable tied to the general ledger.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
321	Adjust for bad debts using the direct write-off or allowance method.	Accounting 2-3	Accounts must be adjusted for bad debt that will not be collected. Accountants can use the write-off or allowance method.	The pros and cons of the write-off and allowance methods and when to use them.	Adjust accounting records for bad debt using both the write-off and allowance methods.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

400 Prepare, Maintain, and Update Payroll and Tax Records

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
401	Compile and record employee time, production and payroll data from time sheets and other records.	Accounting 2-3	Tax and labor laws protect the rights of both the employee and the employer. Employers must ensure employees are paid for their work. For hourly employees, a timekeeping process is essential to protecting both the employee and the employer.	The importance of maintaining accurate employee time, production, and payroll records to ensure accurate payment for work completed.	Compile and record employee time, production and payroll data from time sheets and other records.	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies
402	RESERVED	-				
403	Record employee information to maintain payroll records.	Accounting I-3 Financial & Career Exploration	Employers must maintain records of their employees for legal and tax purposes.	The importance of recording information found on the W-4 forms in the employee data section. How to update employee record information to maintain payroll records.	Evaluate a W-4 form and identify all pertinent information.	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies

404	Calculate benefits including sick pay, vacation time and personal time.	Accounting I-3 Financial & Career Exploration	Employers typically provide a range of benefits to employees. These must be tracked and accounted for to protect both employees and employers.	How to calculate benefits including sick pay, vacation time and personal time.	Calculate benefits including sick pay, vacation time and personal time.	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies
405	Compute wages, taxes (FIT, SIT, FICA, Medicare), other deductions, and net pay.	Accounting I-3 Financial & Career Exploration	Gross earnings is the total amount an employee earns in a pay period. Payroll deductions are amounts withheld from an employee's gross earnings. Deductions typically include a variety of taxes and employee contributions to benefit plans.	How to compute wages, taxes (FIT, SIT, FICA, Medicare), other deductions, and net pay.	Explain and compute employee- paid withholdings Compute net pay Compare for profit businesses and not for profit organizations	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies
406	RESERVED	-				
407	Complete and file payroll tax forms and returns.	Accounting 2-3	Release of cash for payroll is a transaction that must be journalized and posted. Employers are legally required to make tax deposits on time and to report the earrings of each employee. Employers	*Calculate business taxation information. *Complete and file tax forms and returns (i.e. Form 941, W-2, W-3, PAUC, FUTA, SUTA,) appropriate to current government regulations (Electronic Federal Tax Payment	Compute and complete payroll tax expense forms	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies

			must pay taxes in addition to the amounts withheld from their employees.	System) *Process payroll documents, records and checks. *Journalize payroll at the end of the earnings period in appropriate journals. *Journalize the payment of period payroll taxes		
408	Process employee compensation using various payment methods.	Accounting I-3 Financial & Career Exploration	Payroll liabilities and tax records. The release of cash for payroll is a transaction. It must be journalized and posted. Employers are legally required to make tax deposits on time and to report the earrings of each employee. Employers must pay taxes in addition to the amounts withheld from their employees. This is an expense for the business	There are several different methods that can be used to process payroll, but there are some non-negotiable legal requirements that all employers must meet.	*Calculate business taxation information. *Complete and file tax forms and returns (i.e. Form 941, W-2, W-3, PAUC, FUTA, SUTA,) appropriate to current government regulations (Electronic Federal Tax Payment System) *Process payroll documents, records and checks.	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies

409	Journalize payroll at the end of the earnings period in appropriate journals.	Accounting 2-3	Payroll must be appropriately recorded in accounting records.	How to journalize payroll and associated expense correctly.	Journalize payroll at the end of the earnings period in appropriate journals.	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies
410	Journalize payment of period payroll taxes.	Accounting 2-3	Payroll must be appropriately recorded in accounting records.	How to journalize payroll and associated expenses correctly.	Journalize the payment of period payroll taxes	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies
411	RESERVED	-				

500 Financial Statement Analysis

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment

501	Analyze component percentages on the income statement (vertical analysis).	Accounting 1-3	Vertical analysis of an income statement—often called common-size analysis—expresses each line item as a percentage of a base figure (total revenue or net sales). It standardizes financial statements, enabling easy comparison of different periods or companies regardless of size	Vertical analysis allows for comparisons of companies of different sizes.	*Calculate component percentages on the Income Statement. *Calculate Earnings per Share and Price-to-Earnings Ratio for a corporation.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
502	RESERVED	-				
503	Perform various ratio analysis on the balance sheet.	Accounting 1-3	Ratio analysis of a balance sheet is the process of evaluating a company's financial health by comparing specific line items to reveal its liquidity, solvency, leverage, and efficiency. It transforms raw dollar amounts into meaningful percentages that allow for easy tracking over time and comparisons with industry peers	Ratio analysis allows for tracking over time and comparison to industry peers.	*Perform ratio analysis and supporting schedules for the Balance Sheet.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

504	Prepare a horizontal analysis on the income statement.	Accounting 1-3	Horizontal analysis tracks the financial growth or decline of an income statement's line items over multiple periods side by side. It uses two exact formulas to compare an analysis period to a chosen base (prior) period to reveal trends and spot performance anomalies	Horizontal analysis provides information about changes in a company's revenue and expenses over time.	Evaluate changes in line items on an income statement over time.	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

600 Automated Accounting and Spreadsheet Software

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
601	Create, format, and maintain spreadsheets.	Accounting I-3 Microsoft Office Advanced Microsoft Office	Know the terminology relevant to creating and editing a spreadsheet	Understand the relationship between cells, workbooks, and worksheets	Create and save a workbook, enter data in cells,create worksheets within, and navigate among the three aforementioned items.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project

602	Use advanced features to make enhanced user-friendly spreadsheets.	Accounting I-3 Microsoft Office Advanced Microsoft Office	The pros and cons of pasting, linking, and embedding objects in a software application	Understand which (pasting, linking, and embedding) will automatically update as the source is updated.	Paste, link, and embed objects and data within software applications.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
603	RESERVED	-				
604	Create, format, and modify charts and tables.	Accounting I-3 Microsoft Office Advanced Microsoft Office	Vocabulary associated with chart data series, chart plot area, and chart labels.	Understand what chart type to use to illustrate various types of data. Understand what labels and elements enhance a chart.	Create and format effective charts.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
605	RESERVED	-				

606	Manage multiple worksheets and workbooks.	Microsoft Office Advanced Microsoft Office	The differences between a workbook (spreadsheet) and a worksheet.	Understand that there can be multiple worksheets within a workbook.	Create worksheets within a workbook	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
607	Summarize data for analysis.	Accounting I-3 Microsoft Office Advanced Microsoft Office	Pivot tables and charts help to pull information out of spreadsheet data.	When and how to use pivot tables and charts.	Add pivot tables and charts to a workbook.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
608	Survey automated accounting software, e.g., QuickBooks, Peachtree, Sage 50.	Accounting I-3 Microsoft Office Advanced Microsoft Office	The six column worksheet. The worksheet is the tool used to complete the final steps of the accounting cycle. The worksheet organized general ledger account information for the financial statements. After completing the worksheet, you will know the net income or net loss for the accounting period	The worksheet organized general ledger account information for the financial statements. After completing the worksheet, you will know the net income or net loss for the accounting period	Prepare a six column worksheet	Software Comparison Quoz/Project
609	Exhibit familiarity with internal controls for accounting software.	Accounting I Financial & Career Exploration	Internal controls reduce the likelihood of careless or dishonest errors.	How companies can implement internal controls.	Create an internal control process for a real or fictitious organization.	Create Accounting Records for a Pretend Company Mini-Projects

		Business Law	All organizations must have internal controls to ensure accurate and acceptable uses of funds.			Case Studies

700 Business Law and Ethics

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
701	RESERVED	-				
702	Identify the importance of cybersecurity and its impact on confidential data.	Financial & Career Exploration Business Law	Constitutional Rights: foundations of the US Constitution, Division and balance of governmental powers, the internet and constitutional rights	*constitutional rights, with an emphasis on the US Constitution and amendments, the division and balance of power in government and the developing area of law that concerns the internet	*If the documents written in the course of the nation's founding *Explain how the US Constitution addresses and protects the citizens *Describe the system of checks and balances *Explain how the power to govern is divided *Understand the issue of jurisdiction	Cybersecurity Practice Scenarios Tests/Quizzes

703	Explain types of crimes often associated with business and organizations.	Business Law	Criminal law and procedure: criminal law, criminal procedure	*basic of criminal law, surveys businesses related crimes, and details the legal procedure followed in criminal cases	* Understand the three elements that make up a criminal act *Classify crimes according to the severity of their potential sentences *Identify the types of crimes that affect business *Know the rights people have when arrested and their potential criminal liability for the actions of others *Name and describe the two types of defenses to criminal charges *Understand appropriate punishments for crimes	Test/Quizzes Projects
704	Describe familiar business law cases and describe their impact on business practices.	Financial & Career Exploration Business Law	Civil law and procedure: private vs public offenses, intentional torts, negligence and strict liability	*distinguishes crimes from torts, presents in depth the major types of torts, and discussion of civil procedure	*Distinguish a crime from a tort *Identify the elements of torts *Explain why one person may be responsible for another's tort *Identify common	Test/Quizzes Projects

					intentional torts *Recognize the elements of negligence *Explain the basis for strict liability State the legal remedies that are available to a tort victim *Describe the procedure used to try a civil case	
705	Identify the elements and characteristics of a legal contract.	Business Law	Offer and acceptance	*basics of contract formation as found in the matching of a viable offer with proper acceptance	*List the elements required to form a contract *Describe the requirements of an offer *Describe the various ways to end offers * Explain how an offeree can ensure an offer will remain open *Discuss the requirements of an effective acceptance * Determine at what point in time an acceptance is effective	Test/Quizzes Projects
706	Identify improper use of business technology and property.	Business Law Social Media	Property and is acquisition: types of property, how property is acquired and held	*Presents the concept of what our society defines as property, discusses the types of	*Define property *Identify the classifications of property	Test/Quizzes Projects

		in Business & Society Management & Leadership		property and then covers the legal aspects of acquiring and holding property	*State the different ways of acquiring property *Differentiate the various ways of holding ownership to property	
707	Describe legal rights and responsibilities of various business structures when conducting business.	Business Law Social Media in Business & Society Management & Leadership	Forms of business: main forms, creating and termination partnerships, operating partnerships	*Presents a survey of the main organizational forms of business and then examines the sole proprietorship and partnership form in detail	*State the definitions of the three basic forms of business organization *Contrast the attributes of the basic forms of business organization *Describe how a partnership is formed *Explain how a partnership may be ended *List the powers of a partner *Explain the duties and potential liabilities of a partner	Test/Quizzes Projects
708	Identify regulatory bodies governing business law and ethics (Fair Labor Standards, IASB, FASB, SEC).	Business Law	Employment law: making and termination employment contracts, and duties of employees and employers	*Presents the legal aspects of the employment relationship as defined by law	*Describe how employment contracts are made *Explain how employment contracts are terminated *List an employer's duties *Name an employee's	Test/Quizzes Projects

					duties	
709	Identify emerging trends in the 21st century and the resulting growth of forensic accounting.	Financial & Career Exploration Business Law	Forensic accounting is an important way to "follow the money" to determine if and how a crime was committed.	When forensic accounting is necessary.	Explain what a forensic accountant does and why it matters.	Test/Quizzes Projects

800 Computer Applications

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
801	Create, edit, and format documents using word processing software.	All Classes	Know the different content and format standards for personal and professional documents.	Software has functions and features necessary to create and format documents. Templates available that can be modified to user preference.	Create and format personal and professional documents.Word: Ch. 4 - create a title page for the proposal -insert an existing word document -Create a header and footer Edit and format lists -Edit and format tables -create watermark	Resume Form Letter & Mailing Label Project Newsletter Project Sales Proposal Project
802	Enhance documents with visual content.	All Classes	The purpose of using graphics to improve document appearance and communication.	Graphics should support the message of the document, not distract from it.	Insert pictures, shapes, icons, and SmartArt into a document	Business Plans Newsletter Project Sales Proposal Project

			Basic picture formatting tools such as: Crop, Resize, Rotate, Position, Wrap Text, Picture Styles, Artistic Effects, Corrections and Color adjustments.	Proper placement and formatting of visuals improves readability and professionalism.	Format images using crop, resize, rotate, borders, and styles.	
803	Create forms and tables for data display.	Microsoft Office Advanced Microsoft Office	Vocabulary associated with chart data series, chart plot area, and chart labels.	Understand what chart type to use to illustrate various types of data. Understand what labels and elements enhance a chart.	Create and format effective charts.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
804	Prepare various business communication documents.	All classes	Professional, clear communication is critical to all organizations.	How to convey information clearly and professionally, in a manner appropriate to the information being shared.	Create authentic and practice communication pieces that convey information clearly.	Resume Form Letter & Mailing Label Project Newsletter Project Sales Proposal Project
805	Create, edit, and format presentations using presentation software.	All Classes	The different font attributes, slide layouts, presentation templates, and design templates.	Content and design layout principles, 7 and 7 slide layout	Choose appropriate presentation fonts, templates, themes, and slide layouts to create award-winning presentations	Business Plans Newsletter Project Sales Proposal Project
806	RESERVED	-				
807	RESERVED	-				

808	RESERVED	-				
809	RESERVED	-				
810	RESERVED	-				

900 Economics

Task	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
901	Explain the free enterprise system.	Accounting I Microsoft Office Advanced Microsoft Office	In the U.S. free enterprise system, most economic decisions are made by companies and individuals, though they do have to follow local, state, and federal laws.	The role of businesses, individuals, and government in the free enterprise system.	List the costs and benefits of the free enterprise system.	Case Studies Projects Tests/Quizzes
902	Explain the principles of supply and demand.	Accounting I Microsoft Office Advanced Microsoft Office	Supply and demand interact to determine price and quantity of goods and services available in a market.	Explain the principles of supply and demand.	Explain how supply and demand interact.	Case Studies Projects Tests/Quizzes
903	Explain the types of economic systems.	Accounting I Microsoft Office Advanced Microsoft Office	There are a variety of economic systems in the world, each with strengths and weaknesses.	Understand the strengths and weaknesses of each economic system.	List advantages and disadvantages of a variety of economic systems.	Case Studies Projects Tests/Quizzes

904	Identify factors affecting a business's profit.	Accounting I Microsoft Office Advanced Microsoft Office	Profit is determined by revenue and expenses. Companies analyze revenue and expenses to improve profitability.	How different components of revenue and expense can impact profitability.	Identify factors that affect profitability for a business.	Case Studies Projects Tests/Quizzes
905	Explain the relationship between government and business.	Business Law Management & Leadership	The government creates the rules for private enterprise. The government provides services that private enterprise cannot or will not.	The relationship between government and business.	Explain how various laws impact companies. Explain why governments provide public goods like roads and safety services.	Case Studies Projects Tests/Quizzes
906	Explain the concept of productivity.	Accounting I Microsoft Office Advanced Microsoft Office	Productivity measures output per unit of input	How to determine productivity of an input.	Explain productivity and identify ways to increase productivity of an individual or organization.	Case Studies Projects Tests/Quizzes
907	Explain the nature of international trade.	Business Law Management & Leadership	Global trade is essential to the economy as it is currently structured. Goods and services flow across national borders based on the economic advantages of different economies.	Why global trade occurs and how it impacts the U.S. economy.	Identify how local companies and individuals interact with the global economy.	Case Studies Projects Tests/Quizzes

Cover Sheet

Dover Area School District
Curriculum Cover Sheet

CIP Code: 01.0000

CIP Title: Agriculture, General

Planned Hours: 1320

CIP Description:

Agriculture, General is an instructional program that focuses on the general principles and practices of agricultural research and production and may prepare individuals to apply this knowledge to the solution of practical agricultural problems. This program includes instruction in basic animal, plant, and soil science; animal care and plant cultivation; soil conservation; and agricultural operations such as agriscience, production, and agricultural business.

Students who begin in this program may complete it in full using additional agriculture classes to develop a specialization or they may transfer to Horticulture & Landscaping or Agricultural Mechanics.

Component Courses:

859 - Honors Agriscience (120 hours) Ⓢ

Honors Agriscience focuses on a variety of agricultural topics using advancing technology. The class will cover the historical relevance of agriculture, natural resource management and an introduction to the National FFA Organization, a student leadership organization. Additional topics will include animal and plant science systems as well as measuring skills and a study of emerging technology resources. In addition to the curriculum for Agriscience, students will devote a greater degree of time to completing laboratory experiments, critical thinking about scientific concepts, and communicating experimental findings. This course is intended for students who have a strong interest in science and wish to pursue a career in the agricultural sciences or another scientific research-related career field.

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860 - Agriscience (120 hours) Ⓢ

Agriscience focuses on a variety of agricultural topics using advancing technology. The class will cover the historical relevance of agriculture, natural resource management, and an introduction to the National FFA Organization, a student leadership organization. Additional topics will include animal and plant science systems as well as measuring skills and a study of emerging technology resources. This course is designed to help students discover their interests as they relate to agricultural courses as well as developing scientific skills and procedures.

868 - Honors Small Animal Science & Care (120 hours) Ⓢ

This course will emphasize the specific knowledge required to work with and care for smaller animals and pets, focusing on the connection between the knowledge expected of pet owners and that expected of professionals in the veterinary science field. Areas of study will include genetic selection for breeding programs, creating the proper housing environment, providing veterinary care, and understanding animal behaviors. Students will have the opportunity to observe and handle live animals. Additional focus will be placed on knowledge of skills and tools used in veterinary science. This course is recommended for any student considering a career related to veterinary medicine or other types of animal care, especially students who plan to seek a college degree and are considering attending a veterinary school. Students in this class will receive preparation to earn their Youth for the Quality Care of Animals certification.

869 - Exploratory Ag Science (120 hours)

This course explores all aspects of agricultural education and FFA. The course is intended to provide students with a better understanding of the three primary areas within the agricultural program at Dover Area High School: Ag General, Ag Mechanics, and Horticulture & Landscaping.

870- Plant Science/Botany (120 hours) Ⓢ

This laboratory-intensive course provides a comprehensive introduction to botany and plant physiology, satisfying a high school Science graduation requirement. The curriculum focuses on plant taxonomy, cellular structure, anatomy, and the physiological processes of growth and development, including photosynthesis, respiration, and transpiration. Students will bridge the gap between scientific theory and practical application through extensive fieldwork in the school greenhouse, where they will manage plant life cycles, analyze soil composition, and experiment with environmental controls. This course is highly recommended for students interested in post-secondary studies in biology, environmental science, horticulture, or agronomy.

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872 - Small Animal Science & Care (120 hours) Ⓢ

This course will emphasize the specific knowledge required to work with and care for smaller animals and pets. Areas of study will include genetic selection for breeding programs, creating the proper housing environment, providing veterinary care, and understanding animal behaviors. Students will have the opportunity to observe and handle live animals. This course is recommended for any student considering a career related to veterinary medicine or other types of animal care. Students in this class will receive preparation to earn their Youth for the Quality Care of Animals certification.

873 - Large Animal Science & Care (120 hours) Ⓢ

This course focuses on animals used in agriculture. We will discuss the selection, nutrition, reproduction, and management of horses, beef cattle, goats, chickens, swine, and sheep. Other topics include animal anatomy and physiology, animal diseases, and animal research. We will discuss the federal regulations with regard to meat consumption. We will also experiment with different food science techniques. This class is very hands-on and will include labs and dissections. This is a great course for anyone entering the medical field.

887 - Natural Resources Management (120 hours) Ⓢ

This course will prepare students for careers bridging human and environmental systems. We will discuss sustainability, energy sources, wildlife, conservation methods, and more. In a combination of classroom and hands-on learning, students will gain the knowledge needed to manage human interactions with the natural world in parks and protected areas. Those interested in careers involving wildlife, fish and game, research, environmental science and more will benefit from this course.

874 - Agricultural Business & Marketing (120 hours)

This course includes an extensive study of agricultural and small-business financial principles, including marketing, agricultural business structure, advanced recordkeeping, computer-based business analysis, and basic taxes. Career development, including workplace skills, will be discussed. Students completing the Agriculture General, Applied Horticulture, and Agriculture Mechanization Programs would benefit from this course.

879 - Agricultural Mechanics I (120 hours)

Students will learn how to safely operate hand and power tools used for working with wood and metal as they produce several required agriculture shop projects. This is a basic entry-level course for Ag Mechanics. Students will receive preparation to earn their 10-hour or 30-hour U.S. Department of Labor OSHA completion card.

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890 - Supervised Agricultural Experience (120 hours)

REQUIRED: TEACHER MUST APPROVE

In this course, agricultural students will receive detailed help with the initial development and implementation of their Supervised Agricultural Experience project or SAE. Coursework will include an emphasis on project development and record-keeping skills. Students will use the Agriculture Experience Tracker (AET), an online program, to record data about the time and money they devote to their project.

891 - Agricultural Work Experience (120 hours) (Fall)

892 - Agricultural Work Experience (120 hours) (Fall)

893 - Agricultural Work Experience (120 hours) (Spring)

894 - Agricultural Work Experience (120 hours) (Spring)

MUST ALSO BE ENROLLED IN 874 (AG BUSINESS & MARKETING)

Seniors who meet the prescribed requirements are given the opportunity to obtain on-the-job vocational work experience. All students who elect this course must be on the path to being an AG General Program completer. Students will be permitted to leave school one or two periods per day in order to report to their job.

Agricultural Work Experience is designed to provide senior students with an in-depth "real world" career experience. This program, approved for credit by the Pennsylvania Department of Education, connects school-based classroom/laboratory instruction with career and technical knowledge learned on a work site. It provides students with on-the-job training that is directly related to their future career objectives. The Capstone Seminar experience is often viewed as the completing element of secondary career and technical educational experience. It provides a valuable connection when the student graduates and continues with post-secondary education or enters directly into the workforce. The paid employment shall be within careers related to students' Ag-General Program of Study and vocational plan, or a combination thereof. This class is only for the CTE Ag-General program of study completers. Students must be accepted to become a program of study completer to schedule this class. Students must be at least 16 years of age and must accept full responsibility for transportation to/from the workplace. The district and its agents are not liable for transportation and any related injury or loss.

Pacing Guide

PACING GUIDE

***859* / 860 - *Honors* Agriscience (120 hours)**	**Associated Tasks**	**120 Hours**
Circles of Ag Education	501, 502, 504, 505, 507	15 hours
Communication	504, 505, 509	15 hours
Science of Agriculture	302, 402, 403, 404, 406, 409	15 hours
Natural Resources	402, 403, 404, 409, 703, 707	25 hours
Plants and Animals	104, 105, 109, 203, 409, 901, 902, 903, 904, 905, 906	35 hours
Ag Power and Technology	302, 402, 403, 404, 409	10 hours
Agriculture in the Future	905	5 hours
Students in the Honors Class will complete at least two additional projects, labs, and/or lab reports per unit to enrich their experience with the associated tasks.		

***868* / 872 - *Honors* Small Animal Science & Care**	**Associated Tasks**	**120 Hours**
Introduction to Small Animal Science	101, 103	15 hours
Safety	102, 109, 110, 112, 402, 403, 404, 409	15 hours
Pet Ownership	101, 103, 406	15 hours
Animal Rights and Animal Welfare	101, 801, 802, 803	15 hours
Rabbit Feed Study	101, 102, 406	15 hours
Genetics	107, 406	15 hours
Small Animal Species	101, 103	15 hours
Veterinary Science	103, 109, 110, 112, 113, 114	10 hours
Careers and SAE	507	5 hours
Students in the Honors Class will complete at least one additional project per unit to enrich their experience with the associated tasks. There is also an increased emphasis on veterinary skill-building for Honors Students.		

PACING GUIDE

869 - Exploratory Ag Science	**Associated Tasks**	**120 Hours**
FFA & Agriculture	501, 502, 503, 504, 505, 506, 507, 508	15 hours
Plant Science	201, 203, 204, 205, 206, 207	15 hours
Animal Science	104, 105, 110	20 hours
Soil Science	301, 302	10 hours
Ag Mechanics	402, 403, 404, 407	30 hours
Fiber Science	110, 204	15 hours
Energy Sources	702, 703, 710	15 hours

870- Plant Science/Botany	**Associated Tasks**	**120 Hours**
Plant Naming, Classification, & Use	201, 213, 901	7 hours
Plant Anatomy	203, 204	15 hours
Growth & Development	206, 207, 211, 214	15 hours
Photosynthesis & Cellular Respiration	205	15 hours
Soil & Plant Nutrients	206, 301, 302, 303, 304, 305, 306, 307, 308	15 hours
Plant Pathogens	209, 210	10 hours
IPM	209, 210	20 hours
Plant Reproduction	208, 214	11 hours
Biotechnology	212, 801, 802, 803	12 hours

PACING GUIDE

873 - Large Animal Science & Care	**Associated Tasks**	**120 Hours**
Livestock Terminology	101	5 hours
Animal Breeds & Uses	101, 901	12 hours
Handling Techniques & Equipment	102, 111, 113	12 hours
Animal Health & the Consumer	110, 112, 114	20 hours
Science of Blood	107	6 hours
Preventative Medicine	109, 114	10 hours
Nutrients & Digestion	108, 115	15 hours
Animal Anatomy	104, 105	25 hours
Food Safety	903	15 hours

874 - Agricultural Business & Marketing	**Associated Tasks**	**120 Hours**
Business Start-Up	501, 507, 508, 601, 602, 603, 604, 607, 608, 609	15 hours
Managing Finances	501, 502, 602, 603, 605	25 hours
Managing Risk	501, 502, 506, 602, 603	30 hours
Business Planning	501, 503, 506, 510, 602, 603, 606	20 hours
Marketing	501, 506, 510, 602, 603	20 hours
NOCTI Preparation and Completion	All Listed Above	10 hours

PACING GUIDE

879 - Agricultural Mechanics I	**Associated Tasks**	**120 Hours**
Shop Safety & Orientation	401, 402, 403. 404, 408. 409	12 hours
Measurement, Tools, and Layout	402, 403, 404, 406, 407	15 hours
Woodworking Fundamentals	401, 402, 403, 404, 405, 406, 407, 409, 410	22 hours
Basic Electricity	402, 403, 404, 405, 406, 407, 410	15 hours
Welding Fundamentals	402, 403, 404, 405, 406, 409, 410	26 hours
Metal Fabrication & Project Construction	402, 403, 404, 405, 406, 407, 409, 410	30 hours

887 - Natural Resources Management	**Associated Tasks**	**120 Hours**
Sustainability	701, 708, 710	15 hours
Biodiversity & Extinction	707, 711	15 hours
Habitats	704, 705, 707	15 hours
Invasive Species	704, 706	15 hours
Pollution	703, 707	15 hours
Renewable & Nonrenewable Energy	702, 709	15 hours
Wildlife Management	704, 705	15 hours
Climate Change	704, 707, 709	15 hours

890 - Supervised Agricultural Experience	**Associated Tasks**	**120 Hours**
SAE - Independent Study	501, 502, 503, 504, 505, 506, 507, 508	120 hours

Task List (Updates from KUD)

Agricultural, General CIP 01.0000
Competency Task List
100 Animal Science

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
101	Analyze cultural and societal uses and contributions of animals locally and globally through the lens of function and breed.	Small Animal Science Large Animal Science	Humans use and connect with animals for a variety of purposes (companionship, food, labor, service…). Various breeds of each large animal species and their uses past and present National pet trends exist to determine which pet species are most popular. There are specific benefits of pet ownership.	The use of animals by humans creates differences of opinion on animal rights and animal welfare topics. Each animal species has a documented history and domestication process. There are general expectations for the environment and behavior for all animals. Some species have specific requirements. There are general standards for pet care and more specific ones for each species. There are patterned data trends of animal use and popularity throughout history. Some pet ownership benefits are universal and some are for particular age groups. The Stages of Grief for Pet Loss are always	Be able to identify specific breeds and their use Identify and describe benefits of pet ownership. List the Stages of Grief for Pet Loss in order. Care for animals (rabbits) while working toward an economic gain (feed efficiency).	SA: Unit 1 Quiz & Unit 3 Quiz LA: Animal Use Project and Animal Industry Standards Project

				experienced, but at different paces and severity depending on the situation. Economic gain from animals requires different management strategies while maintaining standards of care.		
102	Perform animal handling techniques.	Small Animal Science	How to handle and deal with large animal species and be able to identify various handling equipment Animals perceive the world differently from humans and therefore, behave in different ways. There are approved animal restraint techniques.	There are predictable differences in animal behavior based on their perception. The components of the restraint techniques and the purpose each one serves toward animal and human safety.	Be able to handle most species of livestock, & Be able to choose the proper equipment for the species. Analyze the impact of visual perception on reality and reaction. Demonstrate or describe animal handling using models and stuffed animals. Handle and care for rabbits.	Final Exam Hands-On Practicum
	RESERVED (103)	-				-
104	Identify the external anatomy of animals.	Large Animal Science Agriscience	How the various systems work in livestock, both externally and internally Body parts of animals vary among different species. Animals are selected based upon the quality and correctness of anatomical structure and productive potential.	Some characteristics are more desirable in an animal than others and will impact the value.	Be able to explain how the various systems function and identify the external anatomy Categorize animal names by gender and species. Study and learn the basic anatomical parts of an animal. Develop a poster of the external anatomy of an animal that will be used to teach others. Make decisions based on given priorities and criteria, and analyze objects as they compare to ideal criteria.	LA: Quizzes A: Animal Anthropology Poster

105	Connect the functions of the animal body system to their system components.	Large Animal Science Agriscience	How the various systems work in livestock, both externally and internally	Animals have a complex set of systems that must work together.	Be able to explain how the various systems function and identify the external anatomy Make a concept map of the internal body systems and their relationships.	LA: Various Quizzes. Dissections, & Projects A: Animal Body Systems Presentation
	RESERVED (106)	-				-
107	Predict genetic types using monohybrid and dihybrid Punnett square methods.	Small Animal Science	What a punnett square is, and how to set it up How genetics determine blood type Punnett Squares are the tool used to simulate the probability of inheritance within genetics.	Sequence of steps used to construct Punnett Squares and determine probability. The additional gene interaction of Epistasis.	Be able to identify the types of blood, antigens, and antibodies Be able to draw a punnett square and determine genetic probability Construct and solve predictability from monohybrid and dihybrid crosses Apply genetic problem solving Complete predictability calculations for labrador retrievers utilizing Epistasis.	Genetics Unit Test and/or Final Exam Genetics Problem Solving
108	Explain the significance of the six classes of nutrients for animal growth, performance, maintenance, and reproduction.	Large Animal Science	What the 6 classes of nutrients are.	The 6 classes of nutrients impact the productivity and health of the animal	Be able to identify and explain the importance of the 6 classes of nutrients	Nutrient Quiz and Practicum
109	Administer medicines according to the label.	Small Animal Science	What the various types of preventative health measures, How do you administer them, How to read medications,& How to calculate dosages	Recommended preventative care schedules exist and differ amongst species.	Be able to discuss the various types of preventative measures, administer dewormers, & administer 3 different types of vaccinations	Final Exam Veterinary Dosage Scenario

110	Investigate environmental, food, medicinal, public safety, and biosecurity issues related to animal health.	Small Animal Science Large Animal Science Agriscience	How livestock are cared for, What are the federal requirements for consumption, & What biosecurity measures are in place to protect the food supply	There are known causes, symptoms, treatments, and preventions for animal health issues.	Be able to identify biosecurity measures, debunk common food security misconceptions, discuss USDA's role in animal health, & identify health issues that impact food security	SA: Unit 2 Quiz/Project, Unit 4 Reflective Essay & Final Exam Veterinary Scenario LA: Animal Industry Standards Project A: Unit 5 Lab Activiites & Quizzes
111	Evaluate the equipment and facilities used in modern animal agricultural production.	Large Animal Science	How livestock are cared for, What are the federal requirements for consumption, & What biosecurity measures are in place to protect the food supply	Correct animal care requires knowledge, understanding, and use of accurate and current information.	Be able to identify biosecurity measures, debunk common food security misconceptions, discuss USDA's role in animal health, & identify health issues that impact food security	Equipment ID Use and Quiz
112	Examine the impact of pests and diseases in animal production.	Small Animal Science Large Animal Science	Types of Animal Health Issues. Sequence of basic steps for initial Animal First Aid. Sequence of steps for Canine CPR.	There are known causes, symptoms, treatments, and preventions for animal health issues. Purpose behind each step and the sequence for Animal First Aid. Purpose behind each step and the sequence for canine CPR.	Discuss various zoonotic diseases Provide a possible diagnosis when given resources and a summary of presented symptoms. Create education resource materials about animal first aid response. Demonstrate Canine CPR as an individual and with a partner.	SA: Unit 2 Quiz/Project LA: Pathogen Project and Test
113	Investigate emerging technologies within animal science.	Small Animal Science Large Animal Science	The different types of injections and locations. Veterinarians use specific tools to accomplish their tasks.	Different injection locations are used for different types of medications. The veterinary tool selected needs to match the task to be completed.	Demonstrate correct syringe filling. Identify the veterinary equipment used in the National FFA Veterinary Science CDE based on an assortment of photos.	SA: Unit 2 Project & Unit 4 Essay LA: Equipment Use and Industry Projects
	RESERVED (114)	-				-
115	Analyze the quality	Large Animal	Examples of common feedstuffs.	A balanced diet for an	Be able to identify and explain	Creating Nutrient Label and Quiz on

	of common feedstuffs.	Science		animal consists of multiple feedstuffs to accumulate the needed amounts of nutrients.	the importance of the 6 classes of nutrients	Pearson Square

200 Plant Science

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
201	Classify plants.	Botany & Plant Systems	The levels of taxonomy, Linnaeus' classification system, and the historical and modern uses of plants across the world	The levels of taxonomy, Linnaeus' classification system, and the historical and modern uses of plants across the world	Be able to utilize and create a dichotomous key, identify common plants in PA, articulate the importance of plants in most materials and medicine	Quizzes
	RESERVED (202)	-				-
203	Connect plant structure to plant function.	Botany & Plant Systems Agriscience	Plants have roots, stems, leaves, and flowers.	Each plant part is responsible for specific functions vital to plant survival.	Describe the functions of plant parts.	Project and Quiz
204	Identify products and uses of plant species in the industry.	Botany & Plant Systems	The levels of taxonomy, Linnaeus' classification system, and the historical and modern uses of plants across the world	The levels of taxonomy, Linnaeus' classification system, and the historical and modern uses of plants across the world	Be able to utilize and create a dichotomous key, identify common plants in PA, articulate the importance of plants in most materials and medicine	Plant Use Project
205	Explain the process of photosynthesis/respiration and their importance to life.	Botany & Plant Systems	Students will know: how the processes of photosynthesis, cellular respiration, translocation & transpiration work in plants, and how these processes sustain all life	The connected interactions between photosynthesis and respiration.	Students will be able to: describe how photosynthesis, cellular respiration, translocation, & transpiration work in plants, and how these processes sustain all life	Quiz and Lab
206	Analyze the functions of the essential nutrients	Botany & Plant Systems	How to analyze soil and remediate if necessary, identify the 16 plant nutrients, describe	The impacts of nutrients (and their deficiency) on plant grown.	Be able to perform soil tests, calculate appropriate fertilizer amounts, remediate soil using	Nutrient Project and Plant Analysis

	for plant development.		nutrient function in plants, identify nutrient deficiencies, explain how soil forms, and what components make up soil		sustainable methods, identify nutrient deficiencies, and perform soil analysis utilizing NRCS	
207	Assess the environmental factors that affect the development and maintenance of a plant.	Botany & Plant Systems	Students will know: the common plant pests in PA, identify pathogens that impact plant populations, how pathogens impact plant growth and function, and how to eradicate pests	Environmental factors need to be monitored and controlled, when possible, to provide ideal conditions.	Students will be able to: identify common plant pathogens and discuss their impact on productivity	Quiz and Lab
208	Demonstrate sexual and asexual plant reproduction.	Botany & Plant Systems	Students will know: how plants reproduce and differentiate between asexual and sexual reproduction	Reproduction within plants is consistent within plant species.	Students will be able to: explain the process of sexual and asexual reproduction and create circumstances that allow for maximum reproductive success	Propagation Lab
209	Design an integrated pest management (IPM) plan.	Botany & Plant Systems	Students will know: what IPM is and its overall goal, how to protect important insect species while eradicating pests, and what the negative implications of chemicals are on water and soil	IPM is necessary for successful plant production.	Students will be able to: identify the methods of IPM, develop an IPM plan, distinguish between good and bad insects, calculate economic injury level and economic threshold, and employ IPM methods	IPM Project
210	Examine the impact of pests and diseases in plant production.	Botany & Plant Systems	Students will know: the common plant pests in PA, identify pathogens that impact plant populations, how pathogens impact plant growth and function, and how to eradicate pests	IPM is necessary for successful plant production.	Students will be able to: identify common plant pathogens and discuss their impact on productivity	EIL & ET Quiz
211	Connect the role of plant pollinators to food production.	Botany & Plant Systems	Students will know: what IPM is and its overall goal, how to protect important insect species while eradicating pests, and what the negative implications of	Plant pollinators are a necessary component of continued plant growth and food production.	Students will be able to: identify the methods of IPM, develop an IPM plan, distinguish between good and bad insects, calculate	Anatomy Quiz

			chemicals are on water and soil		economic injury level and economic threshold, and employ IPM methods	
212	Investigate emerging technologies within plant science.	Botany & Plant Systems	Students will know: what biotechnology is and the recent advancements, how biotechnology has impacted both producers and consumers, how to ethically and morally create GMO's while maintaining human health, and how we manipulate environmental conditions to increase plant yields	Impacts of emerging technologies on plant growth and production.	Students will be able to: define and describe biotechnology and its recent developments, discuss the research and trial phase of GMO's, and manipulate environmental conditions to enhance quality and quantity	Unit 7 Quiz and Project
213	Evaluate and critique designs in the horticultural industry using the principles of design.	Botany & Plant Systems	Design examples and types.	Benefits and drawbacks to each design.	Create examples of designs.	Floral Arrangement Project
214	Demonstrate the use of common horticultural tools.	Botany & Plant Systems	Tool names, identification, and uses.	All tools should be used safely for their intended purpose(s)	Use horticulture tools correctly and safely in a variety of settings.	ID Quiz and Use throughout

300 Soil Science

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
301	Explain the processes of soil formation.	Botany & Plant Systems Agriscience	Mineral matter, air, water, and organic matter are found in different proportions within a soil.	Geographical features and environmental factors influence the formation process of soils and impact soil quality.	Determine the texture, structure, and color of each horizon within a soil profile.	B: Quiz and Lab A: Unit 4 Quiz

302	Identify and describe physical, chemical, and biological soil characteristics.	Botany & Plant Systems Agriscience	Miner soils consist of three different soil particle sizes; specifically sand, silt, and clay.Sand, silt, and clay are three sizes of mineral particles that comprise soil texture.The texture, structure, and color of each layer of soil within a profile are used to identify specific horizons.Soil erosion results in the loss of quality top soil.All property is legally defined and recorded based on a standardized regulatory system.Global Positioning System (GPS) is a method used to determine an exact location of a point on the earth using a coordinate system based on longitude and latitude readings.	Geographical features and environmental factors influence the formation process of soils and impact soil quality.Soil structure and soil texture are elements that affect soil function.Soils form in layers that have distinguishing characteristics from other layers in a soil profile.Soil erosion is a concern in the study of mineral soils.Systems for property definitions differ throughout the United States based on geographic and historic factors.Applications of GPS and Geographic Information System (GIS) are used in all disciplines of agriculture and natural resource systems to improve agricultural production efficiencies and environmental quality.	Conduct a sediment test to determine the particle sizes of the mineral matter and the presence of organic matter in a sample of soil.Test soil permeability to understand the relationship between soil particle size and rate of water filtration.Conduct tests to determine soil texture by feel.Determine the texture, structure, and color of each horizon within a soil profile.Conduct an investigation of soil deposition caused by water.Describe parcels of land using the rectangular survey system and the metes and bounds system.Use three points to triangulate a location.	Lab 4.1.1 4.1.1 Lab Report Lab 4.1.2 4.1 Notebook Check
303	Perform soil sampling techniques.	Botany & Plant Systems	Steps for soil sampling.	Purpose of each step in soil sampling.	Collect a soil sample using correct technique.	Unit 4 Project/Lab
304	Analyze and interpret the results of a soil test.	Botany & Plant Systems	Types of soil test reports.	Information provided on soil test reports.	Use information on a soil test report for decision making.	Unit 4 Project/Lab

305	Calculate fertilizer rates to maintain proper plant nutrition.	Botany & Plant Systems	Students will know: the uses of lawn & turf areas, types of grasses, soil properties, site evaluation, ground preparation, and maintenance	Fertilizer rates are a standard that should be followed.	Students will be able to: identify grasses and seeds, collect and analyze soil samples, determine grade and level of sites, sod, till, cultivate, and maintain lawn and turfgrass	Unit 4 Project/Lab
306	Draw conclusions from a soil survey to determine land uses, capability factors, and land capability classes.	Botany & Plant Systems	Soil surveys, land uses classes, capability factors.	The quality and characteristics of land determine how is it best used within society.	Evaluate soil survey information to make decisions about land use.	Unit 4 Project/Lab
307	Evaluate soil conservation practices and soil management techniques and soil health.	Botany & Plant Systems	Examples of practices.	Benefits and drawbacks of processes.	Use information about soil conservation to make planning decisions for soil use.	Unit 4 Project/Lab
308	Investigate emerging technologies within soil science.	Botany & Plant Systems	Examples of new technologies.	Benefits and drawbacks of new technologies.	Determine improvements caused by emerging technologies.	Unit 4 Project/Lab

400 Mechanical Technology and Mechanization

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
401	Identify the progression of technological advancements and their potential impacts in the	Ag Mechanics I	Historical impacts of technology New technologies currently in use	How every action that we take to create solutions for problems has an impact Resources can often be	Identify the potential impact of global applications and emerging technologies	Intro to Ag Mech Lumber Milling

	agricultural industry.			limited based off of use	towards sustainability.	
402	Demonstrate safety rules and regulations.	All Courses	Laboratory equipment has specific uses in scientific experiments.	Reading and understanding laboratory procedures are essential to conducting a laboratory experiment safely.	Identify and describe the use of common laboratory equipment. Follow written procedures to complete a laboratory exercise. Use equipment to collect data for an experiment. Demonstrate the correct use of a microscope.	Lab Grades
403	Wear personal protective equipment.	All Courses	Laboratory equipment has specific uses in scientific experiments.	Purpose behind each PPE item that is worn.	Identify and describe the use of common laboratory equipment. Follow written procedures to complete a laboratory exercise. Use equipment to collect data for an experiment. Demonstrate the correct use of a microscope.	AM: Clean up Activities A: Unit 6 Lab Activiites (if reach this item)
404	Exhibit positive safety attitudes and responsibilities.	All Courses	Laboratory equipment has specific uses in scientific experiments.	Reading and understanding laboratory procedures are essential to conducting a laboratory experiment safely.	Identify and describe the use of common laboratory equipment. Follow written procedures to complete a laboratory exercise. Use equipment to collect data for an experiment. Demonstrate the correct use of a microscope.	

405	Maintain and service mechanical systems.	Ag Mechanics I Agriscience	Components of systems, connections, and overall safety.	Mechanical systems must work together in specific ways and require regular maintenance in order to function correctly.	Maintain and service mechanical systems and/or lab equipment as appropriate.	
406	Perform calculations and measurements used in agricultural technology	Ag Mechanics I	Mass, volume, temperature, and density are common laboratory measurements.	Proper and accurate measurement is important for laboratory investigation.	Measure distance, volume, mass, temperature, and density using the appropriate tools and scale.	Dial Caliper Measurement for Belt Buckle
407	Interpret project plans, blueprints, or schematics.	Ag Mechanics I	Symbols and measurements.	Directions are often provided in various formats that must be combined for successful use.	Read and use project plans of various kinds to complete projects.	Belt Buckle Instructions
408	Investigate emerging technologies of agricultural mechanization.	All Courses	Examples of technological advancements from various times.	Technology is always changing.	Learn, discuss, and use emerging technologies as approved.	Lab and Project Grades
409	Apply concepts on Safety Data Sheets (SDS).	All Courses	Types of information compared on Safety Data Sheets (SDS).	Importance of SDS information and organization systems for document housing.	Dispose of chemicals samples according to directions from SDS after each lab.	Lab Grades
410	Utilize a variety of technical sources (e.g., owner/operator manuals, internet resources, and journals within applications of mechanical technology).	Ag Mechanics I	Gauge scale Current and Voltage Theory Continuity	Technical specifications are essential for power equipment to perform according to manufacturer's recommendations.	Demonstrate accurate readings on cylinder tanks and pressure valves Use a digital multimeter to read voltage and current traveling through a circuit	In class based projects

500 Leadership and Supervised Agricultural Experience (SAE)

Item	Task	Secondary	Know	Understand	Do	Assessment

		Course Cross-Walk				
501	Maintain accurate program plans and records (e.g., SAE).	All Courses	Farms and ranches are businesses and must be managed in an organized, intentional manner. Interest paid on loan principal is a business expense. The decrease in asset value due to depreciation is a business expense. Businesses measure profitability in two ways, net income and return on assets (ROA). The breakeven point of an enterprise occurs when the expenses match the income. Decision-makers use financial documents to plan and manage a business.	Specific types of organizational systems exist and are commonly used for particular purposes in the industry. Business managers use graphs and calculators developed in spreadsheet software to make management decisions.	Implement an organizational system to file course documents. Calculate interest for business scenarios. Calculate depreciation using straight-line method. Calculate and analyze net income and return on assets for business scenarios. Identify income and expenses from raw enterprise records. Make a graph using spreadsheet software illustrating the portion of income compared to expenses for an enterprise. Build common financial calculators in spreadsheet software for use throughout the course.	SAE Grades
502	Analyze records to determine areas of growth (e.g., SAE).	All Courses	Agribusinesses provide products and services from planning to production to retail. Enterprises incur expenses, such as inputs and noncurrent asset purchases. A balance sheet shows the financial position of a business at a point in time. An income statement	The products and services provided by agribusinesses need to fit the needs of the community and provide profitable income in order for them to continue to be available. These expenses are necessary in order to generate income for a business. Business managers measure the health of an enterprise by analyzing financial	Calculate breakeven and use it to analyze the feasibility of an enterprise. Classify typical business expenses as fixed, variable, or noncurrent asset purchase. Analyze the financial health of business operations. Complete an income statement. Identify seasonal income and expense fluctuations.	SAE Grades

			summarizes income and expenses over a specific period to calculate net income. Projected cash flow statements are used to anticipate and plan for seasonal fluctuations in income and expenses. Lenders review financial statements to determine the viability of a business when reviewing a loan application.	documents. The goal of a financial review by a lender is to minimize their own risk prior to lending money to a business or entrepreneur.	Complete a projected cash flow statement. Develop a process to analyze the financial position of a business for lender approval of a loan.	
503	Create short- and long-term SMART (Specific, Measurable, Attainable, Realistic/Results-based, and Timely) goals.	Ag Business & Mktg	SMART Goals are specific, measurable, attainable, realtistic, and timebound.	SMART goals help to monitor progress in a business plan.	Develop SMART goals and a timeline for a business plan.	Business Plan Timeline and Goals Project
504	Serve in a community or civic organization (e.g., Future Farmers of America (FFA)).	All Courses	The National FFA Organization offers members many opportunities to build necessary employment and life skills, such as leadership, personal character, and career options.	Every student who takes an agricultural course has the opportunity to participate in FFA.	Explore educational and personal growth opportunities available through FFA membership.	PA FFA Affiliate Membership

505	Perform leadership tasks associated with citizenship (e.g., Future Farmers of America (FFA)).	All Courses	People utilize multiple forms of verbal and nonverbal communication.Speeches may be informative, persuasive, or special occasion.People develop goals in order to achieve their dreams.	Voice and use of visual aids are tools used in communicating effectively.Teamwork is essential when solving many problems and completing group tasks.	Demonstrate verbal and non-verbal forms of communication in a charades-like game.Prepare and present a formal introduction.Practice effective public speaking characteristics.Develop and present an informative speech.Write a vision statement and develop personal goals.Work collaboratively to complete team building challenges.Develop and present a group Visual Media (ex: Google Slides) presentation about agricultural careers to an audience.	
506	Demonstrate oral, written, and verbal skills necessary for employment.	Ag Business & Mktg	Entrepreneurs use resumes to communicate their experience and skills when planning a business. A business pitch includes specific elements about the plans for a business.	Resumes can have multiple formats, but some are more effective than others. Business pitches are intended to explain a business plan and entice investors to give their financial support.	Catalog skills and experience in a professional resume format. Pitch the business and marketing plans to stakeholders including potential investors and advisors.	2.2.3 “Teaming Up” Presentation
507	Research career opportunities in agriculture.	All Courses	Basic information about agriculture careers.	Careers have educational requirements that individuals should plan for in advance in order to be qualified.	Complete at least one Supervised Agricultural Experience (SAE) and document records about it in AET (Ag Experience Tracker).	Agricultural Career Assignments

508	Create a plan to achieve career goals and priorities.	Ag Business & Mktg	Money is needed in order to acquire the necessities of life.	The amount of income needed to live is different across different geographic locations.	Determine adequate income needed to meet average living expenses.	Business Plan Resume Project, Timeline and Goals Project
509	Conduct and/or actively participate in a meeting.	Agriscience	Parliamentary procedures are used to conduct orderly meetings.	There is a correct system and process for every element of Parliamentary Procedure that can be used to actively participate in meetings in order to share your viewpoints.	Use proper parliamentary procedures to voice an opinion. Demonstrate the proper procedures for making a main motion and an amendment.	Parliamentary Procedure Scenario Activity
510	Use social media as a professional business tool.	Ag Business & Mktg	Entrepreneurs promote their business plan to gain support.	There are multiple options for promotion and advertising to be considered.	Develop a marketing plan for the business plan.	Business Plan and/or Marketing Plan Presentations

600 Agribusiness

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
601	Describe the role agriculture plays in local, state, national, and global economies.	Ag Business & Mktg	A supply chain exists and covers: production, services/supplies, processing, transportation, and marketing.	Each step of the supply chain is a critical factor in providing goods and services to the public. Each step of the supply chain has economic value and job opportunities.	Find evidence of steps in the supply chain for a food item	Unit 1 Quiz
602	Identify functions, roles, and purposes of management in a business.	Ag Business & Mktg	Farms and ranches are businesses and must be managed in an organized, intentional manner. Decision-makers use financial documents to plan and manage a business.	Specific types of organizational systems exist and are commonly used for particular purposes in the industry. Time invested in starting a business reduces potential income from outside	Implement an organizational system to file course documents. Determine how much money a business owner's time is worth. Calculate the value of student time spent on a job.	Unit 1 Quiz

			Budgets provide information about what funds will be needed and available in the future.	employment.	Compare labor expenses paid to an entrepreneur to the return to labor and management for the business.	
603	Maintain accurate business and financial records.	Ag Business & Mktg	Interest paid on loan principal is a business expense. The decrease in asset value due to depreciation is a business expense. Businesses measure profitability in two ways, net income and return on assets (ROA). The breakeven point of an enterprise occurs when the expenses match the income.	Specific types of organizational systems exist and are commonly used for particular purposes in the industry. Business managers use graphs and calculators developed in spreadsheet software to make management decisions.	Calculate interest for business scenarios. Calculate depreciation using straight-line method. Calculate and analyze net income and return on assets for business scenarios. Identify income and expenses from raw enterprise records. Make a graph using spreadsheet software illustrating the portion of income compared to expenses for an enterprise. Build common financial calculators in spreadsheet software for use throughout the course.	
604	Research nontraditional agricultural markets.	Ag Business & Mktg	Commodities represent the raw item available directly from the producer while products have gone through processing.	The value of an item changes as additional steps are needed to prepare the good or service for the public.	Find evidence of steps in the supply chain for a food item	Introductory Project
605	Calculate net worth statement.	Ag Business & Mktg	Financial entries are classified based on if they are owned or owed and timeframe.Net worth is a standard that allows for businesses to be compared.Net worth is a standard that allows for businesses to be compared.Liquidity	Assets are items owned and liabilities are items owed.Current items are within a year while noncurrent items are beyond a year.Current items are within a year while noncurrent items are beyond a year.There are multiple standard formulas that are used to calculate liquidity and solvency.	Categorize sample balance sheet entries as current or noncurrent assets or liabilitiesCompare the net worth for two businesses.Compare the net worth for two businesses.	Unit 2 Quiz/Project

			measures short-term or current business health and solvency looks at the long-term, total picture.			
606	Construct a basic business plan.	Ag Business & Mktg	Starting an entrepreneurial enterprise requires a business plan.Opportunity costs are associated with risk.Financial risk is not the same at all times in a business.Risks and risk management strategies both exist.Awareness of potential risks allows for a plan to mitigate them.Risk potential impacts financial decisions about an investment.Entrepreneurs compare opportunities by calculating returns to investments such as labor, management, assets, and equity.Entrepreneurs must be aware of their competition.	A business plan includes information an investor, banker, or other stakeholder would need to promote, endorse, or support a new business.Labor and management inputs in a business have opportunity costs.Entrepreneurs determine whether opportunity costs of starting and owning a business outweigh the risks.Businesses experience time periods of higher and lower risk based on their cash flow.Different risk management strategies can be used at different times.Awareness of potential risks allows for a plan to mitigate them.Risk potential impacts financial decisions about an investment.All items that can be identified in other businesses should be considered by an entrepreneur when starting their own business and should be reflected in their business plan.	Start a business plan by describing a planned business.Develop SMART goals and a timeline for the business plan.Compile all artifacts for all sections for the course-long business plan.Research various types of risk.Make current borrowing and repayment recommendations to avoid financial risk.Research common risk management strategies and make recommendations for a business.Develop a risk management plan.Simulate investment scenarios in various risk environments.Develop a balance sheet and budget for the business plan.Project cash flow for a business plan.Investigate loan and grant opportunities for the business plan.Calculate and analyze return to labor, management, assets, and equity for businesses.Describe, assign financial value to, and analyze capital, labor, and management opportunities for the business plan.Develop a competitive analysis for the business plan.	Business Plan Project

607	Differentiate between products and commodities in the marketplace.	Ag Business & Mktg	Commodities represent the raw item available directly from the producer while products have gone through processing.	The value of an item changes as additional steps are needed to prepare the good or service for the public.	Find evidence of steps in the supply chain for a food item.	Unit 4 Quiz
608	Apply concepts of supply and demand in agricultural industry.	Ag Business & Mktg	Agricultural businesses face risk in operations.	Businesses utilize strategies such as diversification, insurance, borrowing money, and value-added products, to mitigate risk.	Evaluate and select alternative inputs or business plans. Determine the complimentary and competitive products or services that pose a risk for a business.	Market Research Survey & Business Plan Project Topic Selection
609	Investigate types of ownership and structures of agricultural businesses.	Ag Business & Mktg	There are five common business structures: sole proprietor, partnership, LLC, cooperative, and corporation.	Each business structure has key differences based on who makes decisions and who receives funds. There are both positive and negative aspects to each business structure that need to be considered.	Classify businesses according to five common business structures used in agriculture.	Unit 1 Quiz

700 Natural Resource Management

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
701	Research the history of conservation in Pennsylvania.	Natural Resource Mgmt	Identify the importance of biodiversity to the environment "Understand the key events, policies, and individuals that have shaped the history of conservation in Pennsylvania. Identify major conservation initiatives and their impact on the	Examine the effects of limiting factors on population dynamics Explain the concept of carrying capacity in an ecosystem Analyze possible causes of population fluctuations Describe how limiting factors cause organisms to become extinct Analyze the relationship	Describe how organisms become classified as threatened or endangered Research practices that impact biodiversity in specific ecosystems Analyze the effects of new and emerging technologies on biodiversity in specific ecosystems Evaluate the impact of laws and regulations on reducing	Unit 1: Quiz

			state's natural resources. Explore the role of wildlife and forestry in maintaining ecological balance. Understand how effective natural resources management contributes to overall environmental health. Recognize the economic and recreational importance of wildlife and forestry. Define biodiversity and its significance in sustaining ecosystems. Understand the impact of human activities on biodiversity. Recognize the importance of biodiversity for ecosystem resilience and overall environmental health." Explain the concept of carrying capacity in an ecosystem Describe how organisms become classified as threatened or endangered Describe how limiting factors cause organisms to become extinct Analyze possible causes of population fluctuations Research practices that impact biodiversity in	between habitat changes to plant and animal population fluctuations Evaluate the impact of laws and regulations on reducing the number of threatened and endangered species Examine the concepts of primary and secondary succession and desertification. Understand how human activities can accelerate or disrupt natural changes in ecosystems. Analyze case studies or examples illustrating human influence on ecosystem patterns. Explore and evaluate various solutions to mitigate human impacts on ecosystems. Understand the role of conservation practices, sustainable resource management, and biodiversity preservation in addressing these impacts. Analyze the effectiveness of different solutions through case studies or real-world examples.	the number of threatened and endangered species "Justify the chosen solutions based on scientific evidence and real-world applicability. Research and present a detailed case study illustrating how human activities have affected biodiversity in a specific ecosystem. Analyze the consequences of these impacts and propose potential solutions."	

			specific ecosystems Analyze the relationship between habitat changes to plant and animal population fluctuations Analyze the effects of new and emerging technologies on biodiversity in specific ecosystems Evaluate the impact of laws and regulations on reducing the number of threatened and endangered species			
702	Differentiate between renewable and non-renewable natural resources.	Natural Resource Mgmt	Define conventional and alternative energy sources. Identify common examples of each type of energy source. Define resource management and planning. Identify the goals and objectives of resource management. Define renewable and nonrenewable natural resources. Identify examples of each type of resource.	Understand the key characteristics that distinguish renewable from nonrenewable resources. Understand the importance of sustainable resource management for long-term environmental and economic well-being. Understand the environmental impacts associated with conventional and alternative energy sources. Recognize the role of energy sources within the agricultural industry. Understand the consequences of overexploitation and depletion of nonrenewable resources Understand the role of energy efficiency in promoting sustainability within the agricultural sector.	Consider the sustainable use of renewable resources and the responsible management of nonrenewable resources. Evaluate the potential benefits and drawbacks of alternative energy sources (e.g., solar, wind, bioenergy) within the context of agriculture. Analyze case studies to deepen understanding of effective resource management practices. Choose a specific conventional or alternative energy source and conduct a case study analyzing its environmental and agricultural impacts.	Unit 7: Debate

703	Investigate point and non-point pollution impacts on environment.	Natural Resource Mgmt Agricscience	Water pollution is caused by point and non-point sources. Define point and non-point sources of pollution. Understand the differences between these sources and how they contribute to environmental degradation. Identify common examples of point and non-point pollution in various ecosystems. Define air quality and recognize common pollutants Define waste management and understand its importance for ecosystem health.	The quality of water sources, such as streams and drinking water, can be determined by measuring factors such as temperature, turbidity, dissolved oxygen, and total dissolved solids. Understand the differences between these sources and how they contribute to environmental degradation. Understand the impact of pollutants on water quality. Understand the sources and impacts of air pollution on ecosystems.	Determine the spread of pollution from point and non-point sources Perform tests to determine water quality using the factors of temperature, pH, turbidity, dissolved oxygen, and total dissolved solids. Design an experiment determining the quality of drinking water and conduct the experiment to determine its validity. "Design and conduct a water quality analysis using local water sources. Collect and interpret data on key indicators (e.g., pH, dissolved oxygen, nutrient levels). Conduct an air quality assessment using available resources or air quality monitoring tools. Propose strategies to address identified air quality issues."	NRM: Unit 5 Quiz A: Unit 4 Lab Activities
704	Explain the importance of management and planning of resources.	Natural Resource Mgmt	"Define management and planning of resources in agriculture. Identify the importance of management and planning of resources in agriculture. Critique the sustainability of various agriculture practices.	Explain how sustainable agriculture practices can support food security. Describe the potential environmental impacts of unsustainable agriculture practices. Evaluate the effectiveness of reduce, reuse, and recycle practices in agriculture.	Develop a management plan for a hypothetical farm, considering resource efficiency and sustainability. Critique and propose improvements to a current agricultural practice. Conduct an experiment to demonstrate the effectiveness of a reduce,	All throughout-Quizzes and Projects

			Explain the concept of reduce, reuse, and recycle in agriculture. Analyze how agricultural sciences and technologies strive to increase efficiency. Evaluate the balance between the needs of society and the conservation of natural resources." "Define conventional and alternative energy sources. Identify common examples of each type of energy source. Define resource management and planning. Identify the goals and objectives of resource management. Define renewable and nonrenewable natural resources. Identify examples of each type of resource." "Understand the key characteristics that distinguish renewable from nonrenewable resources. Understand the importance of sustainable resource management for long-term environmental and economic well-being.	Analyze the benefits and drawbacks of different agricultural technologies. Explain how sustainable agriculture practices can benefit both farmers and consumers. "Understand the key characteristics that distinguish renewable from nonrenewable resources. Understand the importance of sustainable resource management for long-term environmental and economic well-being. Understand the environmental impacts associated with conventional and alternative energy sources. Recognize the role of energy sources within the agricultural industry. Understand the consequences of overexploitation and depletion of nonrenewable resources Understand the role of energy efficiency in promoting sustainability within the agricultural sector."	reuse, or recycle technique in agriculture. Analyze data to evaluate the efficiency of a particular agricultural technology. Develop a presentation or report on the importance of sustainable agriculture practices in society. Consider the sustainable use of renewable resources and the responsible management of nonrenewable resources. Evaluate the potential benefits and drawbacks of alternative energy sources (e.g., solar, wind, bioenergy) within the context of agriculture. Analyze case studies to deepen understanding of effective resource management practices. Choose a specific conventional or alternative energy source and conduct a case study analyzing its environmental and agricultural impacts.	

			Understand the environmental impacts associated with conventional and alternative energy sources. Recognize the role of energy sources within the agricultural industry. Understand the consequences of overexploitation and depletion of nonrenewable resources Understand the role of energy efficiency in promoting sustainability within the agricultural sector." Consider the sustainable use of renewable resources and the responsible management of nonrenewable resources. Evaluate the potential benefits and drawbacks of alternative energy sources (e.g., solar, wind, bioenergy) within the context of agriculture. Analyze case studies to deepen understanding of effective resource management practices. Choose a specific conventional or alternative energy source and conduct a case study			

			analyzing its environmental and agricultural impacts.			
705	Identify the importance of wildlife and forestry as it relates to natural resources management.	Natural Resource Mgmt	Identify the importance of biodiversity to the environment "Understand the key events, policies, and individuals that have shaped the history of conservation in Pennsylvania. Identify major conservation initiatives and their impact on the state's natural resources. Explore the role of wildlife and forestry in maintaining ecological balance. Understand how effective natural resources management contributes to overall environmental health. Recognize the economic and recreational importance of wildlife and forestry. Define biodiversity and its significance in sustaining ecosystems. Understand the impact of human activities on biodiversity. Recognize the importance of biodiversity for	Examine the effects of limiting factors on population dynamics Explain the concept of carrying capacity in an ecosystem Analyze possible causes of population fluctuations Describe how limiting factors cause organisms to become extinct Analyze the relationship between habitat changes to plant and animal population fluctuations Evaluate the impact of laws and regulations on reducing the number of threatened and endangered species Examine the concepts of primary and secondary succession and desertification. Understand how human activities can accelerate or disrupt natural changes in ecosystems. Analyze case studies or examples illustrating human influence on ecosystem patterns. Explore and evaluate various solutions to mitigate human impacts on ecosystems.	Describe how organisms become classified as threatened or endangered Research practices that impact biodiversity in specific ecosystems Analyze the effects of new and emerging technologies on biodiversity in specific ecosystems Evaluate the impact of laws and regulations on reducing the number of threatened and endangered species "Justify the chosen solutions based on scientific evidence and real-world applicability. Research and present a detailed case study illustrating how human activities have affected biodiversity in a specific ecosystem. Analyze the consequences of these impacts and propose potential solutions."	Unit 2: Lab and Quiz

			ecosystem resilience and overall environmental health." Explain the concept of carrying capacity in an ecosystem Describe how organisms become classified as threatened or endangered Describe how limiting factors cause organisms to become extinct Analyze possible causes of population fluctuations Research practices that impact biodiversity in specific ecosystems Analyze the relationship between habitat changes to plant and animal population fluctuations Analyze the effects of new and emerging technologies on biodiversity in specific ecosystems Evaluate the impact of laws and regulations on reducing the number of threatened and endangered species	Understand the role of conservation practices, sustainable resource management, and biodiversity preservation in addressing these impacts. Analyze the effectiveness of different solutions through case studies or real-world examples.		

706	Assess the impacts of invasive species on ecosystems.	Natural Resource Mgmt	Define invasive species and understand their characteristics. Identify the ecological and economic impacts of invasive species on native ecosystems. Explore specific examples of invasive species and their effects on biodiversity. Define pest management and understand its significance in agriculture and ecosystems. Explore methods such as cost/benefit analysis, cumulative effects analysis, environmental impact analysis, ethical analysis, and risk analysis used in pest management. Understand the importance of sustainable and ethical pest management practices.	Evaluate the cascading effects of invasive species on native flora and fauna. Critically assess the effectiveness and sustainability of pest management strategies using cost/benefit analysis, cumulative effects analysis, environmental impact analysis, ethical analysis, and risk analysis. Understand the trade-offs involved in different pest management approaches. Understand how invasive species can alter ecosystem dynamics, nutrient cycling, and community structure.	Conduct a comprehensive analysis using cost/benefit, cumulative effects, environmental impact, ethical, and risk analysis. Reflect on the ethical implications of different control methods. Develop a plan to control specific environmental factors in a given scenario (e.g., a greenhouse, agricultural field). Incorporate techniques to regulate temperature, humidity, and soil conditions. Discuss the potential benefits and challenges associated with the proposed environmental control plan.	Unit 4: Quiz and Ceiling Tile Project

707	Analyze and interpret water quality, air quality, and waste management within ecosystems.	Natural Resource Mgmt Agricscience	Land topography describes the shape of the surface of the earth. Define point and non-point sources of pollution. Understand the differences between these sources and how they contribute to environmental degradation. Identify common examples of point and non-point pollution in various ecosystems. Define air quality and recognize common pollutants Define waste management and understand its importance for ecosystem health.	Land topography influences the distribution of water and pollutants. Understand the differences between these sources and how they contribute to environmental degradation. Understand the impact of pollutants on water quality. Understand the sources and impacts of air pollution on ecosystems.	Conduct an experiment that models the flow of water over a landform. "Design and conduct a water quality analysis using local water sources. Collect and interpret data on key indicators (e.g., pH, dissolved oxygen, nutrient levels). Conduct an air quality assessment using available resources or air quality monitoring tools. Propose strategies to address identified air quality issues."	NRM: Chesapeake Bay Foundation Canoe Trip A: Unit 4 Lab Activities & Unit 4 Quiz

708	Critique the sustainability of various agriculture practices.	Natural Resource Mgmt	"Define management and planning of resources in agriculture. Identify the importance of management and planning of resources in agriculture. Critique the sustainability of various agriculture practices. Explain the concept of reduce, reuse, and recycle in agriculture. Analyze how agricultural sciences and technologies strive to increase efficiency. Evaluate the balance between the needs of society and the conservation of natural resources."	Explain how sustainable agriculture practices can support food security. Describe the potential environmental impacts of unsustainable agriculture practices. Evaluate the effectiveness of reduce, reuse, and recycle practices in agriculture. Analyze the benefits and drawbacks of different agricultural technologies. Explain how sustainable agriculture practices can benefit both farmers and consumers.	Develop a management plan for a hypothetical farm, considering resource efficiency and sustainability. Critique and propose improvements to a current agricultural practice. Conduct an experiment to demonstrate the effectiveness of a reduce, reuse, or recycle technique in agriculture. Analyze data to evaluate the efficiency of a particular agricultural technology. Develop a presentation or report on the importance of sustainable agriculture practices in society.	Unit 1: Quiz

709	Analyze the impact of conventional and alternative energy sources on the environment and within the agricultural industry.	Natural Resource Mgmt	Define conventional and alternative energy sources. Identify common examples of each type of energy source. Define resource management and planning. Identify the goals and objectives of resource management. Define renewable and nonrenewable natural resources. Identify examples of each type of resource.	Understand the key characteristics that distinguish renewable from nonrenewable resources. Understand the importance of sustainable resource management for long-term environmental and economic well-being. Understand the environmental impacts associated with conventional and alternative energy sources. Recognize the role of energy sources within the agricultural industry. Understand the consequences of overexploitation and depletion of nonrenewable resources Understand the role of energy efficiency in promoting sustainability within the agricultural sector.	Consider the sustainable use of renewable resources and the responsible management of nonrenewable resources. Evaluate the potential benefits and drawbacks of alternative energy sources (e.g., solar, wind, bioenergy) within the context of agriculture. Analyze case studies to deepen understanding of effective resource management practices. Choose a specific conventional or alternative energy source and conduct a case study analyzing its environmental and agricultural impacts.	Unit 7: Debate

710	Apply concepts of reduce, reuse, and recycle.	Natural Resource Mgmt	"Define management and planning of resources in agriculture. Identify the importance of management and planning of resources in agriculture. Critique the sustainability of various agriculture practices. Explain the concept of reduce, reuse, and recycle in agriculture. Analyze how agricultural sciences and technologies strive to increase efficiency. Evaluate the balance between the needs of society and the conservation of natural resources."	Explain how sustainable agriculture practices can support food security. Describe the potential environmental impacts of unsustainable agriculture practices. Evaluate the effectiveness of reduce, reuse, and recycle practices in agriculture. Analyze the benefits and drawbacks of different agricultural technologies. Explain how sustainable agriculture practices can benefit both farmers and consumers.	Develop a management plan for a hypothetical farm, considering resource efficiency and sustainability. Critique and propose improvements to a current agricultural practice. Conduct an experiment to demonstrate the effectiveness of a reduce, reuse, or recycle technique in agriculture. Analyze data to evaluate the efficiency of a particular agricultural technology. Develop a presentation or report on the importance of sustainable agriculture practices in society.	Unit 1: Quiz
711	Identify the importance of biodiversity to the environment.	Natural Resource Mgmt	Identify the importance of biodiversity to the environment "Understand the key events, policies, and individuals that have shaped the history of conservation in Pennsylvania. Identify major conservation initiatives and their impact on the state's natural resources. Explore the role of wildlife and forestry in	Examine the effects of limiting factors on population dynamics Explain the concept of carrying capacity in an ecosystem Analyze possible causes of population fluctuations Describe how limiting factors cause organisms to become extinct Analyze the relationship between habitat changes to plant and animal population fluctuations	Describe how organisms become classified as threatened or endangered Research practices that impact biodiversity in specific ecosystems Analyze the effects of new and emerging technologies on biodiversity in specific ecosystems Evaluate the impact of laws and regulations on reducing the number of threatened and endangered species "Justify the chosen solutions	Unit 2: Quiz and Lab

			maintaining ecological balance. Understand how effective natural resources management contributes to overall environmental health. Recognize the economic and recreational importance of wildlife and forestry. Define biodiversity and its significance in sustaining ecosystems. Understand the impact of human activities on biodiversity. Recognize the importance of biodiversity for ecosystem resilience and overall environmental health." Explain the concept of carrying capacity in an ecosystem Describe how organisms become classified as threatened or endangered Describe how limiting factors cause organisms to become extinct Analyze possible causes of population fluctuations Research practices that impact biodiversity in specific ecosystems Analyze the relationship between habitat changes	Evaluate the impact of laws and regulations on reducing the number of threatened and endangered species Examine the concepts of primary and secondary succession and desertification. Understand how human activities can accelerate or disrupt natural changes in ecosystems. Analyze case studies or examples illustrating human influence on ecosystem patterns. Explore and evaluate various solutions to mitigate human impacts on ecosystems. Understand the role of conservation practices, sustainable resource management, and biodiversity preservation in addressing these impacts. Analyze the effectiveness of different solutions through case studies or real-world examples.	based on scientific evidence and real-world applicability. Research and present a detailed case study illustrating how human activities have affected biodiversity in a specific ecosystem. Analyze the consequences of these impacts and propose potential solutions."	

			to plant and animal population fluctuations Analyze the effects of new and emerging technologies on biodiversity in specific ecosystems Evaluate the impact of laws and regulations on reducing the number of threatened and endangered species			

800 Biotechnology

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
801	Describe the use of biotechnology in agriculture.	Botany & Plant Systems	Students will know: what biotechnology is and the recent advancements, how biotechnology has impacted both producers and consumers, how to ethically and morally create GMO's while maintaining human health, and how we manipulate environmental conditions to increase plant yields	Biotechnology is not always well received by the general public and is carefully vetted within industry. Consumer eduation and options are essential.	Students will be able to: define and describe biotechnology and its recent developments, discuss the research and trial phase of GMO's, and manipulate environmental conditions to enhance quality and quantity	Unit 7 Project

802	Investigate past, current, and emerging applications of biotechnology in agriculture.	Botany & Plant Systems	Students will know: what biotechnology is and the recent advancements, how biotechnology has impacted both producers and consumers, how to ethically and morally create GMO's while maintaining human health, and how we manipulate environmental conditions to increase plant yields	Biotechnology is not always well received by the general public and is carefully vetted within industry. Consumer eduation and options are essential.	Students will be able to: define and describe biotechnology and its recent developments, discuss the research and trial phase of GMO's, and manipulate environmental conditions to enhance quality and quantity	Unit 7: Project and Lab

803	Explore ethical, legal, and social biotechnology issues.	Botany & Plant Systems	Students will know: what biotechnology is and the recent advancements, how biotechnology has impacted both producers and consumers, how to ethically and morally create GMO's while maintaining human health, and how we manipulate environmental conditions to increase plant yields	Biotechnology is not always well received by the general public and is carefully vetted within industry. Consumer eduation and options are essential.	Students will be able to: define and describe biotechnology and its recent developments, discuss the research and trial phase of GMO's, and manipulate environmental conditions to enhance quality and quantity	Unit 7: Project and Lab
900 Food Science						

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment

901	Identify and describe foods derived from animal and plant sources.	Large Animal Science Agriscience Botany & Plant Systems	Food is derived from animal and plant products.	Consumption trends of food have changed over time based on an increase of information about health issues and technological advances.	Document the plant and animal food products consumed in a 24-hour period.	LA: Animal Uses Project A: Unit 5 Quiz B: Unit 2 Quiz
902	Investigate current consumer food trends.	Agriscience	Food is derived from animal and plant products.	Consumption trends of food have changed over time based on an increase of information about health issues and technological advances.	Determine the percentage of plant and animal food products they consume.	A: Unit 5 Quiz
903	Demonstrate techniques and procedures for the handling of food products.	Large Animal Science Agriscience	How to properly process, handle, and prepare food for consumption	There are many points where food can be contaminated while en route to the consumer.	Perform proper food handling techniques	LA: Food Preparation Project A: Unit 5 Lab Activities
904	Interpret and evaluate results of quality assurance tests on food products and examine steps to implement corrective procedures.	Agriscience	Food must be produced, transported, processed, and stored in a safe way.	There are many points where food can be contaminated while en route to the consumer.	Conduct an experiment to determine bacterial levels of meat samples when refrigerated, stored at room temperature, and cooked. Solve a problem related to a foodborne illness outbreak.	Unit 5 Lab Activities & Unit 5 Quiz
905	Research the impact of state and federal agencies on food supply industries.	Ag Business & Mktg Agriscience	Access to food resources depends on many factors	Agriculture plays an essential role in society and feeding the world.	Write a brief for a presentation proposing a potential solution to world hunger.	AB: Unit 1 Quiz A: Farm to Fork Project
906	Examine the various paths food products take to get from farm to table.	Ag Business & Mktg Agriscience	Food commodities are sourced from producers.	Some food items are purchased while still in commodity form while others have been processed into a prepared food item for retail.	Processing and Preparing of a whole swine Perform proper food handling techniques Research the path a prepared food item takes from production to processing and present their findings to the class.	AB: Unit 1 Quiz A: Farm to Fork Project

1 Student Demonstrated Entry-Level Industry Proficiency as Indicated by (X)

Cover Sheet

Dover Area School District
Curriculum Cover Sheet

CIP Code: 01.0201

CIP Title: Agricultural Mechanization

Planned Hours: 720

CIP Description:

Agricultural Mechanization prepares individuals in a general way to sell, select, and service agricultural or agribusiness technical equipment and facilities, including computers, specialized software, power units, machinery, equipment, structures, and utilities. This program includes instruction in agricultural power units, the planning and selection of materials for the construction of agricultural facilities, safe mechanical practices associated with water conservation, erosion control, and data processing systems.

Component Courses:

874 - Agricultural Business & Marketing (120 hours)
This course includes an extensive study of agricultural and small-business financial principles, including marketing, agricultural business structure, advanced recordkeeping, computer-based business analysis, and basic taxes. Career development, including workplace skills, will be discussed. Students completing the Agriculture General, Applied Horticulture, and Agriculture Mechanization Programs would benefit from this course.

879 - Agricultural Mechanics I (120 hours)

Students will learn how to safely operate hand and power tools used for working with wood and metal as they produce several required agriculture shop projects. This is a basic entry-level course for Ag Mechanics. Students will receive preparation to earn their 10-hour or 30-hour U.S. Department of Labor OSHA completion card.

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Curriculum Cover Sheet

880 - Welding Technology (120 hours)

Prerequisite: Successful Completion or Concurrent Scheduling of Agricultural Mechanics I

This course will focus on arc welding, gas welding, soldering, and MIG welding. Students will complete a set of required welding skills and be evaluated on progress and mastery. Several small metal projects will be required. Safety will be emphasized.

881 - Ag Engine Care (120 hours)

Prerequisite: Successful Completion or Concurrent Scheduling of Agricultural Mechanics I

This course focuses on small gas engine repair and maintenance. Students will complete the disassembly and reassembly of a 4-cycle engine. Theories of operation will be emphasized. Repair manuals, including internet sites, will be used for engine specifications. Proper tool selection and use will be utilized. Troubleshooting engines will be a major focus; some regular car care will be included.

886 - Advanced Agricultural Mechanics (120 hours)

Prerequisite: Successful Completion of Agricultural Mechanics I, Welding Technology, and commitment to complete the Ag Mechanics program.

This course is the final Agricultural Mechanics course that incorporates previously learned skills in welding, building construction, electrical wiring, and small gas engines. Students will complete larger projects of their choice, either individually or in small groups. This course is designed for students who are Ag Mechanics NOCTI completers to hone their skills.

888 - Construction (120 hours)

Prerequisite: Successful Completion or Concurrent Scheduling of Agricultural Mechanics I

In this course, students will learn about building layout, planning, and framing, along with practical theories of electricity, with emphasis on proper wiring techniques. Students will complete a series of labs focused on circuits commonly found in the home, including receptacles and switches. Students will learn to read and produce building plans. Shop work will include a required project and or a major agriculture building construction project. A masonry project will be included. Students will learn basic land surveying.

Dover Area School District
Curriculum Cover Sheet

890 - Supervised Agricultural Experience (120 hours)

REQUIRED: TEACHER MUST APPROVE

In this course, agricultural students will receive detailed help with the initial development and implementation of their Supervised Agricultural Experience project or SAE. Coursework will include an emphasis on project development and record-keeping skills. Students will use the Agriculture Experience Tracker (AET), an online program, to record data about the time and money they devote to their project.

891 - Agricultural Work Experience (120 hours) (Fall)

892 - Agricultural Work Experience (120 hours) (Fall)

893 - Agricultural Work Experience (120 hours) (Spring)

894 - Agricultural Work Experience (120 hours) (Spring)

MUST ALSO BE ENROLLED IN 874 (AG BUSINESS & MARKETING)

Seniors who meet the prescribed requirements are given the opportunity to obtain on-the-job vocational work experience. All students who elect this course must be on the path to being an AG General Program completer. Students will be permitted to leave school one or two periods per day in order to report to their job.

Agricultural Work Experience is designed to provide senior students with an in-depth "real world" career experience. This program, approved for credit by the Pennsylvania Department of Education, connects school-based classroom/laboratory instruction with career and technical knowledge learned on a work site. It provides students with on-the-job training that is directly related to their future career objectives. The Capstone Seminar experience is often viewed as the completing element of secondary career and technical educational experience. It provides a valuable connection when the student graduates and continues with post-secondary education or enters directly into the workforce. The paid employment shall be within careers related to students' Ag-General Program of Study and vocational plan, or a combination thereof. This class is only for the CTE Ag-General program of study completers. Students must be accepted to become a program of study completer to schedule this class. Students must be at least 16 years of age and must accept full responsibility for transportation to/from the workplace. The district and its agents are not liable for transportation and any related injury or loss.

Pacing Guide

PACING GUIDE

874 - Agricultural Business & Marketing	**Associated Tasks**	**120 Hours**
Business Start-Up	101, 201, 202, 204, 205, 208, 211	15 hours
Managing Finances	202, 204, 205, 207, 1201	25 hours
Managing Risk	202, 203, 204, 205, 207	30 hours
Business Planning	202, 204, 205, 209	20 hours
Marketing	202, 204, 205, 209	20 hours
NOCTI Preparation and Completion	All Listed Above	10 hours

879 - Agricultural Mechanics I	**Associated Tasks**	**120 Hours**
Shop Safety & Orientation	402, 403, 404, 409	12 hours
Measurement, Tools, and Layout	101, 401, 402, 601, 602, 604, 605, 606, 901	15 hours
Woodworking Fundamentals	401, 402, 404, 601, 602, 604, 605, 606, 901	22 hours
Basic Electricity	105, 402, 901	15 hours
Welding Fundamentals	202, 203, 402, 601, 602, 604, 605, 606, 901	26 hours
Metal Fabrication & Project Construction	205, 402, 404, 601, 602, 604, 605, 606, 801, 901, 1201	30 hours

PACING GUIDE

880 - Welding Technology	**Associated Tasks**	**120 Hours**
Intro to Welding & Safety	101, 211, 401	10 hours
Gas Welding	601, 602, 604, 605, 606, 901	8 hours
SMAW	601, 602, 604, 605, 606, 702, 704, 901	15 hours
MIG Welding	601, 602, 604, 605, 606, 901	8 hours
TIG Welding	601, 602, 604, 605, 606, 901	16 hours
Pipe Welding	601, 602, 604, 605, 606, 901	10 hours
Project Fabrication	101, 204, 205, 601, 602, 604, 605, 606, 704, 801, 901, 1201	38 hours
Advanced Industry Welding Techniques	204, 402, 601, 602, 604, 605, 606, 901	5 hours
Robotic Welding	204, 601, 602, 604, 605, 606, 901	10 hours

881 - Ag Engine Care	**Associated Tasks**	**120 Hours**
Intro to Engines & Safety	101, 401, 904	12 hours
Basic Engine Theory - 4 Cycle/2 Cycle/Diesel	902, 904	20 hours
Engine Systems	601, 602, 604, 605, 606, 902, 1002, 1003	10 hours
Engine Tear-Down & Rebuild	204, 205, 601, 602, 604, 605, 606, 801, 901, 902, 903, 905, 906, 907, 1001, 1002, 1003, 1004, 1005, 1006	25 hours
FFA Small Gas Engine Career Development Event Introduction	101, 601, 602, 604, 605, 606, 801, 901, 902, 903, 905, 906, 907, 1001, 1002, 1003, 1004, 1005, 1006	10 hours
Engine Trouble Shooting & Customer Repair Interaction	204, 205, 211, 601, 602, 604, 605, 606, 801, 901, 902, 903, 905, 906, 907, 1001, 1002, 1003, 1004, 1005, 1006, 1201	23 hours
Hydraulic Systems and Components	402, 601, 602, 604, 605, 606, 801, 901	10 hours
Electrical Engine Systems and Components	204, 402, 601, 602, 604, 605, 606, 801, 901	10 hours

PACING GUIDE

886 - Advanced Agricultural Mechanics	Associated Tasks	120 Hours
Safety Review	101, 401	10 hours
FFA Ag Mechanics Career Development Event	101, 205, 601, 602, 604, 605, 606, 801, 901	15 hours
Community Involvement Project	101, 205, 211, 212, 213, 402, 601, 602, 604, 605, 606, 801, 901, 1201	30 hours
NOCTI Skills Review Cycles - Electrical, Transit, Welding, Small Gas Engines, Rafter, Oxyacetylene Torch	101, 204, 205, 601, 602, 604, 605, 606, 801, 901	30 hours
Individual Project Design & Fabrication & SAE	101, 204, 205, 601, 602, 604, 605, 606, 801, 901, 1201	30 hours
Shop Maintenance Skills	204, 901, 1101, 1102	5 hours

888 - Construction	Associated Tasks	120 Hours
Zoning and Permitting	101, 204, 205, 301, 302, 303, 304, 1402, 1404	8 hours
General Industry Safety	501, 502	7 hours
Construction Codes & Engineering Principles	204, 205, 303, 304	10 hours
Framing	601, 602, 604, 605, 606, 801, 901	15 hours
Concrete	601, 602, 604, 605, 606, 801, 901, 1202, 1203	15 hours
Electrical	601, 602, 604, 605, 606, 801, 901, 1207, 1208	15 hours
Plumbing	601, 602, 604, 605, 606, 801, 901, 1301, 1302, 1303	15 hours
Heavy Machine Operation	204, 601, 602, 604, 605, 606, 901	10 hours
Authentic Construction Build	101, 204, 205, 211, 301, 302, 303, 304, 601, 602, 604, 605, 606, 801, 901, 1201, 1204, 1205, 1206, 1401, 1403	25 hours

PACING GUIDE

Task List (Update from Spreadsheet)

Competency Task List – Secondary Component

Agricultural Mechanization, General CIP 01.0201

High School Graduation Years 2026, 2027, 2028

100 Supervised Agricultural Experience

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
101	Develop a Supervised Agricultural Experience (SAE) based upon individual interests and career goals.	All Courses	Definition of SAE Identify resources	How record keeping is done in the AET system Why winning scholarships could benefit them Students will be able to use what they are doing to gain future employment	Create an SAE for a self-directed agricultural experience	SAE Assignments

200 Business Development

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
201	Discuss the historical significance of agriculture to US and global economic strength.	Ag Business	Supply Chains Commodity vs. Product	Each step of the supply chain is a critical factor in providing goods and services to the public as well as job opportunities and economic value. The value of an item changes as additional steps are needed to prepare the good or service for the public.	Find evidence of steps in the supply chain for a food item	Unit 1 Quiz

202	Maintain business and financial records.	Ag Business	Business Organization Asset Depreciation Loan Principal vs. Interest Return on Assets (ROA) Breakeven Pricing	Decision-makers use financial documents to plan and manage a business. Tools such as graphs and calculators developed in spreadsheet software are commonly used for management decision-making.	Demonstrate financial calculations and analyze the results to make decisions as a potential business manager. Program formulas in spreadsheet software for automated calculations of entered records.	Business Plan Project
203	Analyze financial sources of credit for agricultural product distribution.	Ag Business	Income Statements Cash Flow Statements Balance Sheets Role of Financial Statements in Money Lending	Business managers measure the health of an enterprise by analyzing financial documents. The goal of a financial review by a lender is to minimize their own risk prior to lending money to a business or entrepreneur.	Analyze the financial health of business operations. Complete income statements, cash flow statements, and balance sheets. Identify seasonal income and expense fluctuations. Develop a process to analyze the financial position of a business for lender approval of a loan.	"A Lender's Dilemma" Activity
204	Use computers to enter, access, or retrieve data.	All Courses	Key commands Software functions and capabilities Plasma cutting functions Basic Metallurgy	Uses of technology interacting with one another to produce work that is more accurate and repeatable is more efficient than trying to produce the same level of work quality by creating a one-of-a-kind product.	Create their own image to be cut on CNC plasma cutter. Manipulate an already existing image to be cut on CNC plasma cutter Complete visual research to reverse engineer products Determine cost of materials based on current pricing	CNC plasma table lab

205	Prepare a technical report.	All Courses	Notes Dimensions Audience	Every material has advantages and disadvantages when creating products. You often have to make difficult decisions Accuracy and communication are important while sharing your ideas with other professionals inside of your industry	Determine the advantages and disadvantages of various materials for the use of engineering a new solution to a current problem.	Class design project
206	Use telephone, mobile, and social media communication techniques.	Ag Mechanics I	Quantity Product Purpose	Proper preparation and understanding help to communicate ideas more effectively	Call a local business and ask for a quote on pricing of material	Class design project
207	Analyze sales activities or agriculture business trends.	Ag Business	Product Service Market Research	The products and services provided by agribusinesses need to fit the needs of the community and provide profitable income in order for them to continue to be available.	Identify potential products and services for a retail market based on market research surveys. Calculate breakeven and use it to analyze the feasibility of an enterprise.	Unit 2 Quiz
208	Use product knowledge to meet customer needs.	Ag Business	Product Service Consumer Want vs. Need	Entrepreneurs anticipate the interests of consumers by researching trends. Competition and marketing influence consumers choosing similar goods and services.	List consumed need and want items and identify source(s) for each. Conduct market research and analyze data collected from a survey to discover a product or service to offer related to an agribusiness of interest.	Market Research Survey, Business Plan Presentation, & Marketing Plan Presentation
209	Access multi-media advertising services.	Ag Business	Marketing Advertising Promotional	There are multiple options for promotion and advertising to be considered.	Develop a marketing plan for an existing business plan.	Business Plan Presentation & Marketing Plan Presentation

210	Develop a sales presentation.	Ag Mechanics I	Audience Product Price Competition	Successful ideas must include a strong balance of form, function, and finance	Present to the group potential bill of materials for project Develop a class presentation for a finished bill of materials	Class design project
211	Demonstrate and communicate goods and/or services to the customer.	All Courses	Audience Product Price Competition History	Successful goods must meet the needs of the consumer Products must be designed to solve the customer's problem	Explain how a created project will meet the needs of a customer.	Class Presentations
212	Develop a logistics plan.	Advanced Ag Mechanics	Logistics, organizing, ordering	Materials and machines must be on a schedule to be maintained. Processes must be put in place so that there is not a loss of production when new consumables need to be ordered.	Students will identify when materials are spent. Tools and consumables will be placed in orderly locations to conveniently be able to identify.	SAE wood waste management
213	Provide customer service needs and training.	Advanced Ag Mechanics	The needs of the customer. The skill that needs training	A deep understanding of problem solving with machines and processes	Work with a customer in order to solve their problems	SAE wood waste management

300 Surveying and Land Use

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
301	Define soil erosion and its causes.	Construction	Erosion, soil types,	Relationships of land and water usage	Determine ways to reduce soil erosion within a multitude of scenarios.	Permitting assignment
302	Identify the various types of land uses.	Construction	Zoning laws	Governmental zoning regulations and their parameters	Determine what zone different land areas are in and the laws that are tied to that zone.	Permitting assignment

303	Perform a site evaluation utilizing surveying equipment.	Construction	Transit, Farm level, Laser level, water level, basic measurement	The relationship between a level surface and measurements from the surface.	Take measurements from different areas and determine the difference in elevation. Research how the use of these tools is accomplished in industry	Transit assignment and practice
304	Evaluate a site's suitability for various agricultural purposes.	Construction	agricultural purposes	the parameters of suitable uses of the agricultural land in question.	Determine the purpose of a plot of ground and execute a use to solve a problem	Transit assignment and practice

400 History and Sustainability of Agricultural Power Systems Technologies

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
401	Describe the historical development of agricultural technologies in power systems.	All Courses	Past and Present systems related to agricultural mechanics	The past must be understood to give us a direction for our future As we learn more, our methods for solving problems will change	Describe the historical development of agricultural technologies in power systems.	Intro to Ag Mech Lumber Milling
402	Identify the potential impact of global applications and emerging technologies towards sustainability.	All Courses	Historical impacts of technology New technologies currently in use	How every action that we take to create solutions for problems has an impact Resources can often be limited based on use	Identify the potential impact of global applications and emerging technologies towards sustainability.	Intro to Ag Mech Lumber Milling

500 Safety

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
501	Complete first aid awareness training.	Ag Mechanics I	OSHA Standards	Rules are designed to keep you safe, not to be convenient.	Practice best practices	OSHA training
502	Complete an OSHA 10-hour equivalent safety course.	Ag Mechanics I	OSHA Standards	Osha	Practice best practices	OSHA training

600 Tools, Equipment, and Hardware

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
601	Operate hand tools and power tools.	All Courses	Hand placement Tool design Tool function	How to best operate a tool to safely perform the ideal function.	Use hand tools safely to create a project following plans provided	In class based projects
602	Operate various gauges and testers used in agricultural power equipment.	All Courses	Gauge scale Current and Voltage Theory Continuity	Technical specifications are essential for power equipment to perform according to manufacturer's recommendations.	Demonstrate accurate readings on cylinder tanks and pressure valves Use a digital multimeter to read voltage and current traveling through a circuit	In class based projects
	RESERVED (603)					
604	Operate powered shop equipment.	All Courses	Tool Function Operating procedures Machine Safety Technical specifications	Machine capabilities, uses and functions as well as safety practices.	Experience using all powered shop equipment to create an ag-related shop project	In class based projects
605	Operate and apply fasteners usage.	All Courses	Screw Bolt Rivet Staple Nail Press Clamp	When fastening needs to be permanent or removable, what type of fit and size will matter based on the fastener selected and the engineered strength of the fastener must meet the needs for the design.	Students will use various fasteners to connect multiple mediums with different methodology	In class based projects

606	Identify and apply concepts for measuring devices.	All Courses	Standard US Measurement to the nearest 16th of an inch Operations for recording a measurement to the nearest 1000th of an inch on Micrometer Decimal equivalents to fractions of an inch from 0 to 1 inch. Operation functions of a Dial Caliper	Measurement and accuracy are 2 things that must always be strived for if you want repeatability or functionality to work in a design.	Students will use Rulers, a micrometer, a dial caliper, a sheet metal gauge, and a Micrometer to take accurate measurements	In class based projects

700 Metal Fabrication and Welding

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
701	Identify various types of metals.	Ag Mechanics I	Know the differences between ferrous and nonferrous metals.	Materials react differently in similar situations based on their Metallurgy. Many different functions of machines will change based on the type of metal you are cutting or welding. Things like speed of rotation or melting point .	Perform tests on metals, painted and unpainted, to determine what type it is. Change machine settings to accommodate the material being worked on.	Selecting materials based off of provided plans
702	Operate arc and stick welding and cutting equipment.	Welding	Tool Function Operating procedures Machine Safety Technical specifications	There are many variables to control while setting up and operating a stick welder. Understand how to get the results you want based on the parameters given.	Properly set up a machine to weld on various thicknesses of steel. Strike and arc and run a constant feed. Successfully weld material together using a variety of joints.	Welding class assignments

703	Operate soldering equipment.	Ag Mechanics I	Capillary adhesion, Temperature, Flux	Where soldering is used in industry, the disadvantages and advantages to soldering vs welding or fasteners. How to control heat safely to solder joints.	Students will solder like and unlike metals together, Students will create a watertight seal and strong seal between 2 separate metallic surfaces.	In class based projects
704	Repair sheet metal products.	Welding	Welding, Spot welding, slip roller, break, sheer, tin snips, nip cutter, and electric power sheer	how a 3 dimensional shape starts out as a flat surface. Sheet metal stretches, shrinks, and forms in a consistent way when the proper tools are used to work the metal. Proper planning must be used to make sure the order of bends and and folds allow for the metal to work in later steps for project creation. Also sheet metal will warp and distort if too much heat is applied in any one location.	Students will use layout tools to mark cut and place holes in sheet metal. Students will fold, bend and crease sheet metal into various forms.	In class based projects
705	Fabricate a metal product.	Ag Mechanics I	Problem solving, machine functions, safety, project planning	How to plan out a project in order to solve a problem; students will understand the correlation between proper planning and execution in their experience.	Create a metal product to solve a problem	In class based projects

800 Technical Documentation

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
801	Interpret blueprints and schematics for welding, building, electrical, and hydraulic systems.	All Courses	Notes, Dimensions, symbols, lines, pictures	What is needed in a drawing for a worker to complete a project. How the lines and symbols help to communicate information.	Read a blueprint and build a project based on the drawing.	In class based projects

802	Create a technical drawing.	Ag Mechanics I	Notes, Dimensions, symbols, lines, pictures	What is needed in a drawing for a worker to complete a project. How the lines and symbols help to communicate information.	Create a blueprint to be read by someone else that will create the final project and include all the information necessary for them to complete.	Ag Mech 1 Design project

900 Engine Systems

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
901	Select mechanical equipment appropriate to the task.	All Courses	The machines and their functions within the lab environment.	Safety, machine capacity	Select machines that will most efficiently accomplish the task	Selecting equipment based on provided plans for class projects
902	Measure power output of various equipment.	Ag Engine Care	Horsepower, Torque, RPM	The true power of machines and how safety around them is paramount.	Students will measure RPM using a tachometer. Students will do a Horsepower lab measuring their own horsepower. They will compare Torque to Horsepower	Horsepower lab
903	Service and repair powertrain.	Ag Engine Care	How to read a check chart, use a torque wrench, measure with dial calipers, micrometers, telescoping gauges, feeler gauges, and other specialty tools that may be engine specific.	Tolerances, what a broken part looks like, compared to one that can be continued to be used. How all the parts work together.	Students will tear down and rebuild a powertrain while practicing taking measurements and comparing them to charts that correspond with the aspects of the engine they are using.	Gas Engine customer project

904	List and describe the operation of various engine types.	Ag Engine Care	horizontal, vertical orientations	Functions of the machine and how power needs to be converted most efficiently to accomplish a task.	Explore different engine types and create a pattern for how they are used inside of an agricultural setting.	Engine type presentations
905	Use specialized tools for engines.	Ag Engine Care	Wrenches, gauges, Power reading devices, Sleeves, pullers, removers	Engines are a very specific technology that tries to marry form and function in such a way that normal tools would not fit or accomplish their normal function in a tighter spot or under different conditions.	Use the specialty tools to complete the tasks when they require the tool use.	Class Engine tear down labs
906	Use measuring and calibration devices.	Ag Engine Care	Standard US Measurement to the nearest 16th of an inch Operations for recording a measurement to the nearest 1000th of an inch on Micrometer Decimal equivalents to fractions of an inch from 0 to 1 inch. Operation functions of a Dial Caliper	The level of complexity that is involved with the conditions of the engine working efficiently are often within 2 or 3 thousandths of an inch.	Students will measure parts of an engine to see if they meet specifications or if they are in need of replacement.	Class Engine tear down labs
907	Troubleshoot an engine and return it to working order.	Ag Engine Care	Checking spark, checking compression, checking the fuel system,	How the 4 strokes of the engine work together within their unique system to run properly.	Break down the engine into 3 parts: compression, spark, fuel, determine what system is at fault and rectify the situation.	Class Engine tear down labs

1000 Machinery and Equipment Systems

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment

1001	Review operating and service resources.	Ag Engine Care	How to find the correct resources, how to find the information they need and are looking for	Technical specification requirements and how to decipher charts and technical breakdowns to solve problems.	Use model numbers and references in order to find the correct manual to use	Class Engine tear down labs
1002	Perform safety inspections.	Ag Engine Care	Proper operation and form of designated equipment	The importance and safety of properly maintaining a piece of equipment for longevity and function.	Use a checklist to identify fluid levels, wear points, and common problems to inspect a piece of equipment regularly used in the shop.	OSHA Training
1003	Operate and calibrate machines.	Ag Engine Care	Machine function	A properly set up machine will last longer and complete jobs safer and with a higher level of accuracy.	Set up new machines and maintain old machines according to manufacturer's specifications	Class Projects
1004	Perform disassembly and assembly procedures.	Ag Engine Care	Order of operations	If parts are removed out of order or put back together in the wrong order, the machine may not operate to specification.	Disassemble and reassemble a small gas engine following a teardown plan	Class Engine tear down labs
1005	Operate machinery and power units.	Ag Engine Care	Safety and potential dangers, machine operation procedures	Power packs store energy that could potentially be harmful. Safely testing systems is a necessity, and the power that is required to test the systems can not be taken for granted.	Students will use electric starting devices as well as machinery to jump start engines and safely test the systems.	Class Engine tear down labs
1006	Maintain, troubleshoot, and repair machines.	Ag Engine Care	Troubleshoot an electric circuit, where the grease points are, and how to operate a grease gun, specifications of the machine in question as well as proper function.	The importance and safety of properly maintaining a piece of equipment for longevity and function.	Use a checklist to identify fluid levels, wear points, and common problems to inspect a piece of equipment regularly used in the shop.	Class Projects and labs

1100 Energy Systems

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1101	Identify the parts and functions of specific energy systems, e.g., electrical power, solar power, wind power, mechanical power, and chemical/carbon-based power systems.	Advanced Ag Mechanics	How energy is created, where energy is stored, how much energy is consumed	The environmental impact on energy use	Discuss and research energy in our specific region. Report on the process and findings back to the class on electric, solar, wind, and mechanical power.	Presentations on power systems
1102	Identify the principles of power transmission, heat transfer, evaporation, hydraulic systems, conductivity, satellite transmission, conservation, and regulations.	Advanced Ag Mechanics	How the use of machines and technologies impacts their community and environment	The flow of cause and effect throughout technology	Explore local regulations that have to do with the technological impact of ag mechanics	Hydraulic cart lab, Power system presentations

1200 Agricultural Structures

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1201	Develop an itemized bill of materials and determine costs.	All Courses	Bill of Materials, Cost of materials, basic math,	Bill of materials is instrumental for making decisions for items that need to be purchased as well as making good business decisions.	Students will create a project that will require price as well as parts that they must complete a bill of materials for.	Product design project
1202	Layout a structure foundation.	Construction	How to survey, square, level, and prepare a cite, local building codes	Foundation measuring and layout steps are most important to be able to build a structure on top of. If the foundation is not correct, the building will never survive.	Research local building codes, survey, square, level, and prepare a site for a building	Concrete lab
1203	Calculate, mix, and finish concrete and masonry units.	Construction	Concrete proportions, finishing techniques	Measurement and proper techniques directly affect the quality of the product	Mix, pour, and finish a concrete slab	Concrete lab

1204	Select building materials.	Construction	Function of building, location	Weather, location usage will all have contributing factors to style and materials used in construction.	Create a building for a specific purpose	Construction project
1205	Operate woodworking equipment/machinery, as needed in the agricultural sector.	Construction	Grain structure, species reaction to cutting tool, moisture content, woodworking safety and tool application	The medium being used to solve the problem and working with the material in question to support a stable solution.	Students will use woodworking tools to create a finished wood project from start to finish	Construction project
1206	Design a building for an application in agriculture using new technologies.	Construction	New or current technologies	How new technologies are not always feasible based on availability or demand.	Create a building for a specific purpose using new technologies	Construction project
1207	Construct various switched electrical branch circuits.	Construction	basic home wiring, local electrical code	Understand how following electric codes will help to make sure that your circuits are safe as well as effective	Create a series of branch circuits	Electrical lab
1208	Troubleshoot electrical systems.	Construction	basic home wiring, local electrical code	How Electrical tools will help you to safely determine problems in complex wiring applications	Inspect wiring and follow codes in order to troubleshoot problems. Students will use a multimeter to take electrical measurements	Electrical lab

1300 Plumbing, Irrigation, and Water Systems

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1301	Cut, assemble, and pressure test components within various types of water supply systems.	Construction	Soldering techniques, Compression fittings	The process of using the tools correctly is important to make sure that hydraulic circuits do not leak	Students will experiment making different connections in fluid circuit to test connections	Plumbing lab

1302	Calculate pump and pipe size based on water requirements, head, and friction losses for water and irrigation systems.	Construction	Pump calculations, reading a chart	The amount of flow is proportional to the power created by the circuit. Hazards can occur if the system cannot handle the energy created.	Students will calculate the amount of fluid needed for hydraulic circuits	Plumbing lab
1303	Identify the components in various agricultural irrigation systems.	Construction	pumps, hoses, tanks	How the parts of an irrigation system work together to accomplish the goals of the system	Use and identify parts in an agricultural system	Plumbing lab

1400 Environmental and Natural Resource Systems

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1401	Identify environmental problems and use equipment and tools needed to measure the issues in agriculture.	Construction	Surveying equipment use, how to take a soil sample	Why the makeup of the soil will affect the agricultural structure that will be used on it	Survey a plot of land and take a soil sample	Construction Project
1402	Use various map types and aerial photos for natural resource management and conservation.	Construction	How to fly a drone	How aerial footage can be used to solve problems with land use in an agricultural setting	Fly a drone and take photos	Permitting assignment
1403	Identify global positioning systems, remote sensing, and collection equipment for various applications.	Construction	GPS, trilateration	Use the mapped points to solve agricultural problems	Use GPS to map data points	Construction Project
1404	Identify and evaluate storage and waste disposal systems and procedures.	Construction	Trash, Recycling, energy	Where it goes, what is done with it, how it can be used for creating energy or improving the environment	Discuss and explore waste management and recycling procedures	Permitting assignment

Cover Sheet

Dover Area School District
Curriculum Cover Sheet

CIP Code: 52.0401

CIP Title: Administrative Assistant and Secretarial Science. General

Planned Hours: 1320

CIP Description:

A program that generally prepares individuals to perform the duties of administrative assistants and/or secretaries and stenographers. Includes instruction in business communications, principles of business law, word processing and data entry, office machines operation and maintenance, office procedures, public relations, secretarial accounting, filing systems and records management, and report preparation.

Component Courses:

610 - Financial and Career Explorations (120 hours)

This course consists of two main components: Financial Literacy and Career Explorations. The Financial Literacy component is designed for students to build a strong foundation of personal financial skills to assist in preparation for adulthood. Emphasis will be placed on the following: managing personal spending to meet financial goals, understanding and controlling the use of credit and debt, developing an awareness of the impact of education on earning potential, exploring how money can work for us through saving and investing, using financial services, and the protection of assets through risk management. Students will use real-world examples and take part in activities including goal writing, personal budgets, investing simulations, and checking and savings account applications. The career portion of the class emphasizes the Pennsylvania Academic Standards for Career Education and Work. The class will provide students with the opportunity to begin or continue their examination into the future beyond high school. Students will have the opportunity to identify their personal aptitudes, abilities, and interests and connect those to possible career placements. Satisfactory completion of Smart Futures activities 1, 2, 3, 6, 7, 12, 14, and 15 is required to earn the credit for the course.

631- Accounting I (120 hours)

Students are taught basic double-entry accounting principles as an overall background to business organization and operations for vocational and personal use. Emphasis is placed on the principles and methods of recording business transactions and the preparation of financial

statements for sole proprietorship and service businesses. The course is highly recommended for students planning on majoring in business at college.

645 - AP Business with Personal Finance (120 hours)

AP Business with Personal Finance is a college-level course that introduces students to core business concepts—including entrepreneurship, marketing, management, accounting, and finance—while building essential personal financial literacy skills. Students learn how businesses identify customer needs, compete in markets, make strategic and ethical decisions, and manage operations using real-world case studies and project-based learning. Satisfactory completion of Smart Futures activities 1, 2, 3, 6, 7, 12, 14, and 15 is required to earn the credit for the course. The course also equips students with practical financial skills such as budgeting, saving, borrowing, managing risk, and investing for long-term goals. Major projects include developing a new product through a Business Canvas Project and completing a Financial Advisor Project.

652 - Business Law (120 hours)

Students will explore the foundations of business law as well as the application of legal concepts. Topics include contracts, the law of sales, property law, agency and employment law, legal forms of business organization, borrowing money, and paying bills.

660 - Microsoft Office (120 hours)

Microsoft Office is a comprehensive course designed to teach students intermediate-level software applications using Microsoft Office. This course includes Word, Excel, PowerPoint, and the Internet. In addition, students will complete integrated projects and internet research tasks. Students will have the opportunity to earn a Microsoft Office Specialist credential through Certiport. These software application skills benefit students in all areas of life.

661- Management & Leadership (120 hours)

College in the High School Course

Are you a leader or aspiring leader in our school? Do you want to improve your leadership abilities? The Management & Leadership course introduces students to key leadership and ethical knowledge and skills, including integrity, trust, accountability, transparency, fairness, and respect. Students will use real-world situations to help strengthen their leadership and ethical decision-making skills through the planning, implementation, and evaluation of a class service-learning project. Students may opt to receive college credit for this course through an articulation agreement with York College.

Dover Area School District
Curriculum Cover Sheet

662 - Advanced Microsoft Office (120 hours)

Advanced Microsoft Office is a comprehensive course designed to teach students ***advanced-level*** applications in ***Microsoft Office.*** Students will have the opportunity to utilize and develop broader skills learned in Microsoft Office. Emphasis is placed on the following advanced applications: Word, PowerPoint, and Excel. Internet search strategies will be used to gather/collect information from websites to create and enhance student projects. Priority will focus on the integration of software packages and student application projects. Skills learned in the advanced course will benefit students in their academic, personal, and business lives.

667 - Sports & Entertainment Marketing (120 hours)

The Sports & Entertainment Marketing course develops student understanding of the sport/event industries and their impact on local communities and products. In addition, instruction includes distribution systems and strategies, pricing considerations, marketing-information management, selling, product-service management, and promotion. Students acquire an understanding and appreciation of the need for planning. Throughout the course, students are presented with problem-solving situations for which they must apply academic and critical thinking skills.

668 - Entrepreneurship (120 hours)

Are you hoping to start your own business one day? Entrepreneurship introduces students to a wide array of entrepreneurial concepts and skills, including the role of entrepreneurship in our economy, entrepreneurial discovery processes, ideation, and preliminary start-up venture planning. Students also develop an appreciation for marketing's pivotal role in the development and success of a new business. They become acquainted with channel management, pricing, product/service management, and promotion. Students conduct thorough market planning for their ventures: selecting target markets; conducting market, SWOT, and competitive analyses; forecasting sales; setting marketing goals and objectives; selecting marketing metrics; and setting a marketing budget. The capstone activity in the course is the development of a start-up business plan and detailed marketing plans for students' businesses.

685 - Business & Marketing Essentials/DECA (120 hours)

Are you interested in learning about careers in marketing or business? Are you interested in learning more about DECA? This course is an introductory level course that enables students to acquire a realistic understanding of business practices while introducing them to the opportunities available through the DECA organization. Students will use their creativity to develop business documents, promotional items, and presentations. They will also be

presented with ethical dilemmas and problem-solving situations for which they must apply academic and critical-thinking skills. Completion of this course will give students the general knowledge necessary to participate and compete in the district and state DECA conferences if desired.

686 - Social Media in Business and Society (120 hours)

College in the High School

REQUIRED: STUDENTS MUST BE A MEMBER OF DOVER DECA AND/OR ENROLLED IN ONE OF THE BUSINESS PATHWAYS: ACCOUNTING, BUSINESS OFFICE MANAGEMENT, OR MARKETING.

Examination of the strategic use of social media for personal, professional, and business communication, advertising, and marketing. Coursework includes using various social media tools, creating and sharing content, and collaborating on group campaigns using social media for positive change. Includes analysis of current and emerging social media tools from a personal and business perspective. We will be using an online platform and textbook for which each enrolled student is responsible for covering the cost (lab fee). This course will also require access to social media content from Facebook, Instagram, TikTok, Snapchat, Twitter, Pinterest, LinkedIn, and YouTube during the course. Sales, Distribution, & Marketing Operations, General CIP 52.1801

Pacing Guide

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610 - Financial and Career Explorations	**Associated Tasks**	**120 Hours**
Unit 1: Financial Goals & Money Management Tools	204, 205, 206, 207	12
Unit 2: Income	909	23
Unit 3: Spending & Credit	909, 1103, 1104	19
Unit 4: Saving & Investing	NA	18
Unit 5: Risk & Insurance	NA	11
Unit 7: Career Acquisition & Preparation	240, 205, 207, 308	18
Unit 8: Career Retention & Advancement	905, 1004, 1304, 1307, 1402, 1404, 1405	19

631- Accounting I	**Associated Tasks**	**120 Hours**
Unit 1: Introduction to the Role of Accounting in Business	1201	16
Unit 2: Understanding and Recording Transactions	1201	40
Unit 3: Posting to the General Ledger	1204	18
Unit 4: The Six-Column Worksheet	1206	10
Unit 5: Key Financial Statements	1207,1208	10
Unit 6: Complete Accounting Cycle for a Sole Proprietorship	1201-1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210	18
Unit 7: Cash Control & Banking	1205	8

645 - AP Business with Personal Finance	**Associated Tasks**	**120 Hours**
Unit 1: Businesses, Competition, and New Ideas	204, 205, 206, 801, 804, 905, 1001, 1002, 1004, 1302, 1303, 1304, 1305, 1306, 1307, 1402,	28 hours

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	1404, 1405	
Unit 2: Marketing	204, 205, 206, 303, 401, 404, 405, 409, 601, 602, 701, 702, 703, 801, 804, 805, 905, 1101, 1102, 1104, 1304, 1306, 1307, 1402, 1404, 1405	26 hours
Unit 3 Part 1: Personal Saving and Borrowing	401, 405, 909, 1101, 1102, 1103, 1201, 1202, 1205, 1304, 1306, 1307	4 hours
Unit 3 Part 2: Business Finance and Accounting	401, 403, 404, 405, 407, 409, 909, 1101, 1102, 1103, 1104, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1302, 1304, 1306, 1307	22 hours
Unit 4: Management and Strategy	N/A	22 hours
Unit 5: Personal Goals, Budgeting, and Investing	909	18 hours
Optional Additional Personal Finance Coverage		15 hours

652 - Business Law	**Associated Tasks**	**120 Hours**
Unit 1: Laws and Their Ethical Foundation	1302	6
Unit 2: Constitutional Rights & the Court System	1302	19

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Unit 3: Civil Law and Procedure	1302, 1304, 1306	7
Unit 4: Contracts	1303, 1305, 1306	20
Unit 5: Ownership and Risk of Loss in Sales	1303, 1305, 1306	4
Unit 6: Consumer Protection	1306	7
Unit 7: Real Property Laws	1303	16
Unit 8: Insurance, Trusts, and Estates	NA	8
Unit 9: Employment Law	1304, 1306	8
Unit 10: Legal Business Structures	1306	15
Unit 11: Credit	N/A	10

660 - Microsoft Office	**Associated Tasks**	**120 Hours**
Unit 1: Hardware & the Internet	201, 202, 203, 204, 205, 206, 207	8 hours
Unit 2: Word - Flyers, Letters, and Reports	301, 303, 308, 910, 912	42 hours
Unit 3: Excel - Spreadsheets with Formulas and Charts	401, 403, 404, 405, 407, 909, 910, 912	42 hours
Unit 4: PowerPoint - Presentations with Themes and Graphics	601, 602, 701, 702, 703, 908, 910, 911, 912, 913	30 hours
Unit 5: Introduction to Simple Databases	501, 502, 503, 504, 505, 910, 912	8 hours

661- Management & Leadership	**Associated Tasks**	**120 Hours**
Unit 1- Course Policies, Expectations, and Procedures	NA	11 hours

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Unit 2 - Planning & Organizing	1001, 1003, 1004	30 hours
Unit 3 - Organizational Culture and Managing in a Global Environment	NA	14 hours
Unit 4 - Staffing & Directing	1001, 1002, 1003, 1004, 1005	35 hours
Unit 5 - Customer Service	1402, 1404, 1405	10 hours
Unit 6 - Leading	NA	20 hours

662 - Advanced Microsoft Office	**Associated Tasks**	**120 Hours**
Unit 1: Word - Watermarking, Forms, Merge, Templates	306, 703	30 hours
Unit 2: Excel - Spreadsheets with Advanced Formulas	401, 403, 404, 405, 407, 409, 909	40 hours hours
Unit 3: PowerPoint - Presentations with Embedded Elements	601, 602, 701, 702, 703	25 hours
Unit 4:Databases & Forms	501, 502, 503, 504, 505, 910, 912	25 hours

667 - Sports & Entertainment Marketing	**Associated Tasks**	**120 Hours**
Unit 1 - Course Policies, Expectations & Procedures	NA	7 hours
Unit 2- Fundamentals of Sports & Entertainment Marketing	NA	12 hours
Unit 3- Product/Service Management	902, 903, 904, 1005	16 hours
Unit 4- Marketing Information Management	912, 913	23 hours
Unit 5- Market Planning	1101	5 hours
Unit 6- Pricing	1101, 1104	7 hours
Unit 7- Advertising	911, 913	28 hours

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Unit 8- Publicity & Public Relations	207, 801, 802, 803, 804, 805, 908, 911, 913, 1104,	12 hours
Unit 9- Sales Promotion	911, 913, 1101, 1104	5 hours
Unit 10- Event Scheduling	908	5 hours

668 - Entrepreneurship	**Associated Tasks**	**120 Hours**
Unit 1- Course Policies, Expectations, and Procedures	NA	5 hours
Unit 2- Entrepreneurship Basics	NA	28 hours
Unit 3- Generating Ideas	NA	24 hours
Unit 4- Determining Feasibility	1101	9 hours
Unit 5- Establishing your Business	NA	7 hours
Unit 6- Determining a Mission	NA	4 hours
Unit 7- Market Planning	1101	16 hours
Unit 8- Product/Service Management	902, 903, 904, 1005	2 hours
Unit 9- Channel Management	NA	4 hours
Unit 10- Pricing	1101, 1104	6 hours
Unit 11- Promotion	207, 911, 913, 1101, 1104	15 hours

685 - Business & Marketing Essentials/DECA	**Associated Tasks**	**120 Hours**
Unit 1&2 - Course Expectations & Intro to DECA	NA	16 hours
Unit 3 - Business Communications	801, 802, 803, 804, 805, 901, 902, 905, 910, 1001	14 hours
Unit 4 - Business & Ethics	1303, 1307	9 hours
Unit 5 - Economics	1101	8 hours

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Unit 6 - Marketing	1402, 1404, 1405	24 hours
Unit 7 - Entrepreneurship	1004, 1101, 1211, 1303	14 hours
Unit 8 - Hospitality & Tourism	1004, 1101, 1211, 1303, 1306	20 hours
Unit 9 - Leadership & Project Management	701, 1004, 1005,	15 hours

686 - Social Media in Business and Society	**Associated Tasks**	**120 Hours**
Unit 1- Introduction to Social Media Marketing	207, 804, 805, 910. 913, 1004, 1405	5 hours
Unit 2- Social Media Marketing Strategy	207, 805	13 hours
Unit 3- Develop Your Personal Brand	NA	13 hours
Unit 4- Marketing with TikTok	207, 804, 805, 910. 913, 1004, 1405	9 hours
Unit 5- Marketing with Snapchat	207, 804, 805, 910. 913, 1004, 1405	9 hours
Unit 6- Marketing with Facebook & Instagram	207, 804, 805, 910. 913, 1004, 1405	9 hours
Unit 7- Marketing with YouTube	207,804, 805, 910. 913, 1004, 1405	9 hours
Unit 8- Marketing with Twitter & Pinterest	207, 804, 805, 910. 913, 1004, 1405	5 hours
Unit 9- Marketing with LinkedIn	207, 804, 805, 910. 913, 1004, 1405	5 hours
Unit 10- Blogs, Vlogs, Podcasts, Webinars	207, 804, 805, 910. 913, 1004, 1405	13 hours
Unit 11- Social Media Marketing Campaign	207, 804, 805, 910. 913, 1004, 1405	9 hours
Unit 12- Influencer Marketing with Social Media	207, 805	9 hours
Unit 13- Social Media Analytics & Measuring ROI	1101	9 hours

PACING GUIDE

Task List (Update from KUD Spreadsheet)

Competency Task List –
Secondary Component

Administrative Assistant & Secretarial Science, General CIP 52.0401

High School Graduation Years 2025, 2026, 2027

100 Reserved

200 Computer and Internet

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
201	Identify different types of devices and how they relate to networks (wired vs. wireless).	Microsoft Office	Network Devices: Know the different types of network devices (routers, switches, access points, etc.). End Devices: Know the different types of end devices (computers, smartphones, printers, IoT devices, etc.).	Wired vs. Wireless: Understand the key differences between wired and wireless networks (speed, reliability, security). Network Topologies: Understand how different network topologies (star, mesh, bus) impact device connectivity and performance.	Identify Devices: Identify various network devices and their functions in both wired and wireless networks. Connect Devices: Connect devices to a network using appropriate methods (Ethernet cables for wired, Wi-Fi for wireless).	Kahoot Quizzzes

202	Differentiate between operating systems and applications software.	Microsoft Office	The differences between operating systems and applications software.	The purpose of operating systems and applications software/	Use software to accomplish tasks.	Kahoot Quizzzes
203	Identify the functions of computer hardware, software, apps, and peripheral devices in the Information Processing Cycle.	Microsoft Office	The definitions of computer hardware, software, apps, and peripheral devices in the Information Processing Cycle.	That Hardwardware and software are dependent upon each other.	Use computer software and hardware to perform tasks.	Kahoot Quizzzes
204	Utilize the internet and network resources.	All Classes	The differences between an intranet and the Internet.	How resources are stored and accessed.	Utilize the internet and network resources.	Kahoot Quizzzes
205	Assess, interpret, and manipulate intranet and internet research.	All Classes	Define: Intranet and internet	How to access and transmit information via an Internet and Intranet connection	Assess, interpret, and manipulate intranet and internet research.	Kahoot Quizzzes
206	Import and export data using multiple applications.	All Classes	How to import and format data	Data in a correlating chart will update when the spreadsheet is updated.	Import and export data using multiple applications.	Kahoot Quizzzes

207	Identify various video/audio conferencing platforms and how they can be used for meetings and collaboration.	Bus & Mktg Essentials Financial & Career Exploration Management & Leadership Entrepreneurship I	Identify various video/audio conferencing platforms and how they can be used for meetings and collaboration.	The pros and cons of video conferencing	Participate in video conferencing.	Kahoot Quizzzes

300 Document Processing Software

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
301	Utilize templates to prepare documents.	All Classes	Know the difference between a template and a working document Keywords: Read Only	There can be a lot of time saved with a template to not have to recreate a document or invoice over and over when only some elements change.	Students will be able to create and effective templates in word processing, spreadsheets and presentation material for the purpose of saving time and being more efficient.	Resume Form Letter & Mailing Label Assorted Projects Newsletter Project Sales Proposal Project
	RESERVED (302)					

303	Enhance documents with graphics.	All Classes	The purpose of using graphics to improve document appearance and communication. Basic picture formatting tools such as: Crop, Resize, Rotate, Position, Wrap Text, Picture Styles, Artistic Effects, Corrections and Color adjustments.	Graphics should support the message of the document, not distract from it. Proper placement and formatting of visuals improves readability and professionalism.	Insert pictures, shapes, icons, and SmartArt into a document Format images using crop, resize, rotate, borders, and styles.	Resume Form Letter & Mailing Label Assorted Projects Newsletter Project Sales Proposal Project
	RESERVED (304-305)					
306	Use the mail merge function to create documents.	Advanced Microsoft Office	Understanding Mail Merge Data Source Merge Fields	Mail Merge Process Customization Data Source Management	Preparing Data Source Connecting to Data Source Inserting Merge Fields	Mail Merge Project
	RESERVED (307)					

308	Create, edit, and format documents.	All Classes	Know the different content and format standards for personal and professional documents.	Software has functions and features necessary to create and format documents. Templates available that can be modified to user preference.	Create and format personal and professional documents.Word: Ch. 4 - create a title page for the proposal -insert an existing word document -Create a header and footer Edit and format lists -Edit and format tables -create watermark	Resume/Cover Letter Project Form Letter & Mailing Label Project Newsletter Project Sales Proposal Project

Resume/Cover Letter Project

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
401	Create, edit, and format spreadsheets.	Accounting I Microsoft Office Advanced Microsoft Office	Know the terminology relevant to creating and editing a spreadsheet	Understand the relationship between cells, workbooks, and worksheets	Create and save a workbook, enter data in cells,create worksheets within, and navigate among the three aforementioned items.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
	RESERVED (402)					

403	Integrate worksheet applications through pasting, linking, and embedding.	Accounting I Microsoft Office Advanced Microsoft Office	The pros and cons of pasting, linking, and embedding objects in a software application	Understand which (pasting, linking, and embedding) will automatically update as the source is updated.	Paste, link, and embed objects and data within software applications.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
404	Create, format, and modify charts using spreadsheet software.	Accounting I Microsoft Office Advanced Microsoft Office	Vocabulary associated with chart data series, chart plot area, and chart labels.	Understand what chart type to use to illustrate various types of data. Understand what labels and elements enhance a chart.	Create and format effective charts.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
405	Create formulas and use standard functions using spreadsheet software.	Accounting I Microsoft Office Advanced Microsoft Office	The available formulas and functions.	Understand mathematical functions and order of operations	Create and edit formulas	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project
	RESERVED (406)					
407	Manipulate multiple worksheets and workbooks.	Accounting I Advanced Microsoft Office	The differences between a workbook (spreadsheet) and a worksheet.	Understand that there can be multiple worksheets within a workbook.	Create worksheets within a workbook	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project

	RESERVED (408)					
409	Summarize complex data facts, including pivot-tables and look-up tables.	Advanced Microsoft Office Entrepreneurship I	Pivot tables and charts help to pull information out of spreadsheet data.	When and how to use pivot tables and charts.	Add pivot tables and charts to a workbook.	Accounting Practice Sets Excel Practice Sets Business Plan Project Budget Project

500 Database Software

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
501	Enter data and update databases.	Microsoft Office	Database terminology such as records, fields, tables, and primary keys. Data types (text, number, date/time, currency, etc.). The importance of data accuracy, consistency, and integrity.	Accurate data entry is essential for maintaining reliable and useful databases. Following established data-entry procedures helps prevent errors and inconsistencies. Proper database maintenance supports efficient information management.	Enter new records into a database. Add, modify, and delete data as needed. Follow data-entry standards and procedures.	Mortgage Project Practice Sets from Text

502	Create databases.	Microsoft Office	Table structures and field properties.	Database structures should be planned to meet user and organizational needs.	Configure field properties and validation rules.	Mortgage Project Practice Sets from Text Screen Checks
503	Query databases.	Microsoft Office	The purpose of queries in database management. Query criteria and operators (e.g., =, >, <, AND, OR).	Well-designed queries help users make informed decisions based on data. Databases can answer specific questions through the use of queries.	Apply criteria to filter records. Use multiple criteria in a query.	Mortgage Project Practice Sets from Text Screen Checks
504	Develop relationships to create queries.	Microsoft Office	The purpose of relationships in a relational database. Types of relationships: one-to-one, one-to-many, and many-to-many.	Properly designed relationships improve data accuracy and integrity. Queries can retrieve information from multiple tables when relationships are established correctly.	Create one-to-one, one-to-many, and many-to-many relationships when appropriate. Establish relationships between related tables.	Mortgage Project Practice Sets from Text Screen Checks

505	Create reports and forms/combo boxes.	Microsoft Office	The purpose of forms, reports, and combo boxes in database systems. The function of combo boxes and other form controls. Differences between forms and reports.	Reports are used to organize and present data in a readable format for analysis. Combo boxes improve data entry accuracy by limiting choices to predefined options. Well-designed forms improve efficiency and reduce data entry errors.	Create reports from database tables and queries. Add and configure combo boxes in forms. Modify form layouts for usability and clarity.	Mortagage Project Practice Sets from Text Screen Checks
506	RESERVED					

600 Presentation Software

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
601	Create, edit, and format presentations.	All Classes	The different font attributes, slide layouts, presentation templates, and design templates.	Content and design layout principles, 7 and 7 slide layout	Choose appropriate presentation fonts, templates, themes, and slide layouts to create award-winning presentations	Presentation Projects

602	Enhance a presentation with features.	Advanced Microsoft Office Social Media in Business & Society	-Pictures and objects can enhance a presentation. -The audience and whether the presentation will be printed, or on-screen live action.	-That color, shape, and content of pictures can enhance a presentation. -How to use print layout features for hard copy. How to effectively use animations and transitions.	-Incorporate relevant pictures and objects to create award-winning presentations. Choose appropriate printing layouts and on-screen animations and transitions to create visuals that provide the best audience experience.	Presentation Projects
603	RESERVED					

700 Desktop Publishing Software

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
701	Create, edit, and format publications.	All Classes	The generally accepted formatting guidelines for flyers, letters, and reports.	How to modify document properties, page layouts, and fonts.	Create professional flyers, letters, and reports.	Newsletter Project Advertisement Project Business Plan Project

702	Enhance a publication with features.	Advanced Microsoft Office Social Media in Business & Society	The advanced features of publishing tools such as Word, PowerPoint, Canva.	How using these features will help them generate profession looking publications.	Apply these advance features to create visually appealing publications.	Newsletter Project Advertisement Project Business Plan Project
703	Apply design principles to page layout.	Advanced Microsoft Office Social Media in Business & Society	-That format and design themes exist. -The information that should be included in a header/footer.	-How to create headers/footers with different first page and different sections.	-Create professional letters and reports with required content.	Newsletter Project Advertisement Project Business Plan Project

800 Communications and Collaboration

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
801	Utilize electronics communications software.	All Classes	The different types of electronics communications, email, messaging apps, and video conferencing tools.	Recognize how they can be used for different purposes. Proper etiquette.	Choose and use the appropriate communication tool professionally.	Send calendar invites to email groups.

802	Apply electronics and phone communications etiquette.	All Classes	The basic rules for polite and respectful communication and settings.	The differences in communication tone between formal and informal situations.	Use electronic communication tools and effective listening.	Scripts and Customer Service Videos.
803	Use scheduling and contact management software.	All Classes	How to schedule events and appointments	The value of scheduling can have on attaining work and personal goals.	Schedule appointments and create contacts using an app.	Send calendar invites to email groups.
804	Utilize electronic collaboration tools.	All Classes	The benefits and drawbacks of electronic communications	How to contribute through electronic collaboration tools.	Participate in electronic collaboration tools.	View google docs, sheets, slides revision history
805	Distinguish and utilize different types of social media.	Bus & Mktg Essentials Microsoft Office Advanced Microsoft Office Social Media in Business & Society	The different social media platforms.	The different target audiences of each social media platform.	Be responsible and kind when using media.	Rate the features, benefits, and advantages of each for reaching different market segments.

900 Office Skills

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment

901	Build keyboarding speed and accuracy.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office Advanced Microsoft Office Social Media in Business & Society	Key Layout: Familiarize with the standard QWERTY keyboard layout. Home Row Technique: Understand the importance of the home row (ASDF for the left hand, JKL; for the right hand).	Muscle Memory: Comprehend how repetitive practice develops muscle memory. Importance of Accuracy: Understand that building accuracy is as crucial as speed.	Practice regularly to develop musle memory. Use Typing Software: Utilize typing software and online tools for practice.	Typing.com score speed and accuracy gains.
902	Use copier, fax, and scanner features.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office Advanced Microsoft Office Social Media in Business & Society	Basic Functions: Know the fundamental functions of a copier, scanner, and fax machine.	Document Handling: Understand how to handle various document types (e.g., single-sided, double-sided, size variations).	Operate Machines: Operate copier, scanner, and fax machines independently.	Demonstration /video
903	File and manage records and materials.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office	Types of Records: Know the different types of records (physical and electronic) that need to be	Retention Policies: Understand the importance of retention policies and how they dictate the duration for which	Organize Files: Organize and categorize physical and electronic records systematically.	Accounting practice set.

		Advanced Microsoft Office Social Media in Business & Society	managed. Filing Systems: Familiarize yourself with various filing systems (alphabetical, numerical, chronological, etc.). Confidentiality: Understand the importance of maintaining confidentiality and data security when handling records.	records must be kept. Confidentiality: Understand the importance of maintaining confidentiality and data security when handling records.	Create Folders: Create and label folders for both physical and electronic records accurately.	
904	Process incoming and outgoing mail, including shipments.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office Advanced Microsoft Office Social Media in Business & Society	Types of Mail: Know the different types of mail (letters, packages, registered mail, etc.). Record Keeping: Know how to maintain records of incoming and	Mail Sorting: Understand the importance of sorting mail accurately and efficiently. Impact of Errors: Understand the potential impact of errors in mail processing on business operations.	Sort Mail: Sort incoming mail by department, recipient, or priority. Maintain Logs: Maintain accurate logs of mail received and sent.	Accounting practice set.

			outgoing mail.			
905	Use interpersonal communication skills in a diverse work environment.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office Advanced Microsoft Office Social Media in Business & Society	The importance of interpersonal communication in the workplace Verbal and nonverbal communication methods Active listening techniques and strategies Appropriate workplace etiquette and professional behavior The value of diversity, equity, and inclusion in a work environment Cultural differences that may affect communication styles Conflict resolution strategies and problem-solving techniques Teamwork skills	Effective communication improves teamwork, productivity, and workplace morale Diverse perspectives strengthen problem-solving and decision-making Respectful communication helps prevent misunderstandings and conflict Listening is just as important as speaking in professional settings Professional behavior builds trust and credibility with coworkers and supervisors Conflict can be resolved positively through clear communication and mutual respect Successful employees adapt	Demonstrate active listening during conversations and group discussions Communicate clearly and respectfully with peers, supervisors, and customers Use appropriate verbal and nonverbal communication in workplace scenarios Work effectively with individuals from diverse backgrounds and perspectives Resolve conflicts using professional and respectful communication strategies Collaborate as part of a team to complete tasks and solve problems Practice workplace etiquette in both in-person and digital communication Show empathy,	Role plays

			and collaboration expectations How respect, empathy, and professionalism contribute to workplace success The role of communication in building positive workplace relationships	their communication style to different people and situations	professionalism, and cultural awareness in workplace interactions	
	RESERVED (906-907)					
908	Plan travel arrangements and events.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office Advanced Microsoft Office Social Media in Business & Society	Basic travel and event planning terminology (itinerary, venue, RSVP) Common travel booking methods (online, travel agents) Key elements of an event plan (schedule, guest list, budget)	The importance of detailed planning to ensure smooth travel and successful events Common travel booking methods (online, travel agents) The significance of selecting appropriate venues and vendors to meet the event's purpose and audience	Create a detailed travel itinerary including flights, accommodation, and transportation arrangements Common travel booking methods (online, travel agents) Research and select suitable venues, caterers, and other vendors for the event	Dream Vacation Project with daily agendas, hyperlinks, budget.

			Types of travel documents required (passports, visas, tickets)	How to ensure compliance with travel regulations and requirements	Prepare and organize necessary travel documents	
909	Create and maintain a budget.	Accounting I Financial & Career Exploration Microsoft Office Advanced Microsoft Office	Methods for tracking income and spending: Manual methods (e.g., pen and paper, spreadsheets), Digital tools (e.g., budgeting apps, personal finance software), Envelope system, Bank and credit card statements Budgeting approaches: 50-30-20 rule, Zero-based budgeting Components of a personal budget: Income sources (e.g., wages, investments),	How each method works and its pros and cons How each budgeting approach allocates income and prioritizes spending How each component contributes to the overall structure and purpose of a personal budget	Identify and list methods for tracking income and spending Identify and list various budgeting approaches Identify and apply the list of components to create a personal budget	Dream Vacation Budget Affording the Lifestyle Budget

			Fixed expenses (e.g., rent/mortgage, utilities, insurance), Variable expenses (e.g., groceries, entertainment, transportation), Savings and debt repayment goals			
910	Proofread and revise text.	All Classes	What proofreader's marks mean.	How to make the changes.	Make corrections to a marked-up document with proofreader's marks	Throughout all applications and projects.
911	Use interactive presentation devices.	All Classes	How to display from a mobile device to IWB	How to use a screen broadcast app.	Share their screen to a class of students.	Present Dream Vacation, Business and Marketing Plans
912	Utilize office reference manuals/materials.	All Classes	How to access document templates online. How to access assistance within a software program.	How to access and edit a template. How to ask a software program for assistance.	Create word-processed documents using standard conventions.	As needed throughout all courses.

913	Integrate various office software.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office Advanced Microsoft Office Social Media in Business & Society	How to access document templates online. How to access assistance within a software program.	How to access and edit a template. How to ask a software program for assistance.	Create word-processed documents using standard conventions.	Resumes, Cover Letters, Proposals, Business Plans

1000 Office Management

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1001	Plan and manage office activities, e.g., agendas, minutes, meetings, and workshops.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office Advanced Microsoft Office	What content items should be included in an agenda.	How including categories such as, "person responsible" will facilitate the creation of accurate meeting minutes.	Create effective word-processed meeting agendas.	Business Plans, Club and Business Meeting Agendas
1002	Describe the roles and responsibilities of an office manager within the organizational chart.	Bus & Mktg Essentials Financial & Career Exploration Business Law	Business Management & Administration-Management Levels: top management, middle	Management structure and responsibility inside a company must be understood as an employee and to those aspiring for a	Identify the different management levels.	Organization chart within a presentation.

			management, first-line management, financial manager, operations manager, marketing manager, human resource manager, administrative manager	leadership role.		
1003	Use workplace ergonomics and follow workplace safety practices.	All Classes	Strategies to maintain a safe work space reduce fatique and acute health problems.	The hazzards and risks associated with an unsafe workplace	Create and maintain a safe and healthy work environment.	Keyboarding angle in all classes, printer location and traffic flow in all computer labs.
1004	Utilize time management skills by setting priorities and performing multiple tasks.	All Classes	How to track their progress and complete items of high priority first.	The benefits of using a Daily Progress Monitoring Journal. The benefits of participation during interactive instruction.	Maintain a Daily Progress Monitoring Journal. Participate during interactive instuction.	Time Management, Charting Variances Project in FCE. Establishing business, marketing, advertising, inventory

						deadlines and recuring billables/deliveries.
1005	Create, maintain, implement, and follow policy/procedure manual.	Accounting I Bus & Mktg Essentials Financial & Career Exploration Business Law Microsoft Office Advanced Microsoft Office Social Media in Business & Society	Purpose of Policies/Procedures: Know the importance and purpose of having policies and procedures in place. Key Components: Know the key components that should be included in a policy/procedure manual (e.g., purpose, scope, responsibilities.	Policy Structure: Understand the typical structure and components of a policy/procedure manual. Consistency: Understand the need for consistency in language and format throughout the manual.	Write Policies: Draft clear and comprehensive policies and procedures. Review Existing Policies: Review and revise existing policies and procedures as needed.	Business Plans, employment/staffing needs.

1100 Business Math

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1101	Perform calculations using addition, subtraction, multiplication, and	Accounting I Financial & Career Exploration Microsoft Office	How to complete basic mathmatical calculations.	When to use each calcaulation to solve a busines-related problem.	Use mathematical calcuations to in a variety of business applications.	Budgeting, Payroll Calculations, and Finance

	division.	Advanced Microsoft Office Entrepreneurship I				Charges in FCE Business Plan Project Family Budget Project Accounting Mini Projects
1102	Convert decimals, percents, and fractions to their equivalent parts.	Financial & Career Exploration Microsoft Office Advanced Microsoft Office	How to convert. decimals, percents, and fractions to their equivalent parts.	When to use different methods based on business conventions.	Use decimals, percents, and fractions in a variety of business scenarios, converting as necessary between forms.	Budgeting, Payroll Calculations, and Finance Charges in FCE Business Plan Project Family Budget Project Accounting Mini Projects
1103	Maintain business checking and savings accounts.	Accounting I Financial & Career Exploration Microsoft Office Advanced Microsoft Office	What types of accounts banks offer.	Different accounts have different features, and it is important to match account features to business or individual needs.	Choose the correct type of bank account for a variety of scenacrios	Checking Account Simulation in FCE. Business Plan Project Family Budget Project Accounting Mini Projects

1104	Calculate discounts, markups, and sales tax.	Accounting I Financial & Career Exploration Microsoft Office Advanced Microsoft Office	How to calculate discounts, mark-up and sales tax.	All of the calcuations involve similar use of percentages.	Determine the price a consumer will pay after discounts. Determine the mark-up for products sold by retailers. Determine how much sales tax adds to a purchase.	Accounting Mini Projects Comparison Shopping Project Business Plan Pricing and Promotion

1200 Accounting

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1201	Apply the accounting equation and classify accounts.	Accounting I Financial & Career Exploration Advanced Microsoft Office	Know the accounting equation. Any item of property has at least one financial claim against it. Owner's equity is changed by revenue, expenses and withdrawals	How to apply the accounting equation to a variety of transactions.	Show how businesses use accounts Demonstrate the effects of transactions on the accounting equation. Set up Accounting records for a sole proprietorship Analyze business transactions Record transactions in the general journal Post to the general ledger Prepare a trial	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

					balance	
1202	Analyze transactions affecting assets, liabilities, and owner's equity.	Accounting I Financial & Career Exploration Advanced Microsoft Office	Transactions that affect assets, liabilities, and owner's capital. In accounting you need to analyze transactions into debit and credit parts. A business's transactions can be analyzed by using the double entry accounting system, which recognizes the different sides of business transactions as debit and credit	A business's transactions can be analyzed by using the double entry accounting system, which recognizes the different sides of business transactions as debit and credit	Use T accounts to analyze transactions that affect assets, liabilities and the owner's capital account	Create Accounting Records for a Pretend Company
1203	Analyze transactions into debit and credit parts.	Accounting I Financial & Career Exploration Advanced Microsoft Office	Accountants analyze transactions into debit and credit parts. The double entry accounting system	A business's transactions can be analyzed by using the double entry accounting system, which recognizes the different sides of business transactions	Use T accounts to analyze transactions that affect assets, liabilities and the owner's capital account	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

			recognizes the different sides of business transactions as debit and credit.	as debit and credit		
1204	Post to general ledger.	Accounting I	Journal entries must be posted to special or general ledger accounts. Up to date account balances provide information for reports used by people both inside and outside the businesses. The general journal is a permanent record organized by account number. Posting is the process of transferring information from the journal to individual accounts in the ledger. The trial balance	The general journal is a permanent record organized by account number. Posting is the process of transferring information from the journal to individual accounts in the ledger. The trial balance is a proof the total debits equal total credits in the ledger.	Post general journal entries Prepare a trial balance	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

			is a proof the total debits equal total credits in the ledger.			
1205	Reconcile bank statements and establish and replenish petty cash fund.	Accounting I Financial & Career Exploration	Internal controls are steps taken to protect assets and keep reliable records. The bank reconciliation is an important internal control to ensure records match reality.	Bank reconciliation should match with accounting records.	Reconcile a bank statement	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
1206	Prepare worksheet and adjusting entries.	Accounting I-3 Advanced Microsoft Office	Not all financial changes are caused by transactions with other businesses or individual. Some changes occur with a business. Adjustments transfer the cost of 'used up' assets to expenses accounts. Adjustments for	How to record and post adjusting and closing entries.	Determine which general ledger accounts to adjust Calculate the adjustments	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

			changes in merchandise inventory are made directly to the income summary account			
1207	Prepare balance sheet and income statement.	Accounting I-3 Advanced Microsoft Office	Financial statements provide essential information for making sound decisions. The income statement reports the net income or net loss. The statement of changes shows the changes in financial interest during the accounting period. The balance sheet reports the financial position at a specific point in time. The statement of cash flows reports, the sources and uses	The income statement reports the net income or net loss. The statement of changes shows the changes in financial interest during the accounting period. The balance sheet reports the financial position at a specific point in time. The statement of cash flows reports, the sources and uses of cash during the accounting period	Prepare a statement of changes in owner's equity Explain the purpose of the balance sheet	Create Accounting Records for a Pretend Company Mini-Projects Case Studies

			of cash during the accounting period			
1208	Record adjusting and closing entries.	Accounting 1	Not all financial changes are caused by transactions with other businesses or individual. Some changes occur with a business. Adjustments transfer the cost of 'used up' assets to expenses accounts. Adjustments for changes in merchandise inventory are made directly to the income summary account	How to record and post adjusting and closing entries.	Determine which general ledger accounts to adjust Calculate the adjustments	Create Accounting Records for a Pretend Company Mini-Projects Case Studies
1209	Prepare timesheets payroll records.	Accounting 1	Tax and labor laws protect the rights of both the employee and the employer. Employers must	The importance of maintaining accurate employee time, production, and payroll records to ensure accurate	Compile and record employee time, production and payroll data from time sheets and other records.	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies

			ensure employees are paid for their work. For hourly employees, a timekeeping process is essential to protecting both the employee and the employer.	payment for work completed.		
1210	Prepare payroll accounting taxes and reports.	Accounting I	Release of cash for payroll is a transaction that must be journalized and posted. Employers are legally required to make tax deposits on time and to report the earrings of each employee. Employers must pay taxes in addition to the amounts withheld from their employees.	*Calculate business taxation information. *Complete and file tax forms and returns (i.e. Form 941, W-2, W-3, PAUC, FUTA, SUTA,) appropriate to current government regulations (Electronic Federal Tax Payment System) *Process payroll documents, records and checks. *Journalize payroll at the end of the earnings period in appropriate journals. *Journalize the payment of period	Compute and complete payroll tax expense forms	Prepare the weekly payroll for a pretend company. Mini-Projects Case Studies

				payroll taxes		
1211	Identify types of accounting software.	Accounting I	Businesses often use specialty accounting sofrware, though very small businesses may be able to manage with a simple spreadsheet.	DIfferent businesses need different fucntions in their software.	Evaluate the best software for different business ventures.	Mini-Projects Case Studies

1300 Business Law and Ethics

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
	RESERVED (1301)					
1302	Explain crimes often associated with business and organizations, e.g., embezzlement, extortion, computer crimes.	Business Law	Criminal law and procedure: criminal law, criminal procedure	*basic of criminal law, surveys businesses related crimes, and details the legal procedure followed in criminal cases	* Understand the three elements that make up a criminal act *Classify crimes according to the severity of their potential sentences *Identify the types of crimes that affect business *Know the rights people have when arrested and their potential criminal liability for the actions of others *Name and describe	Test/Quizzes Projects Employment/Child Labor Law

					the two types of defenses to criminal charges *Understand appropriate punishments for crimes	
1303	Identify proper use of business technology and property.	Business Law Social Media in Business & Society Management & Leadership Entrepreneurship I	Property and is acquisition: types of property, how property is acquired and held	*Presents the concept of what our society defines as property, discusses the types of property and then covers the legal aspects of acquiring and holding property	*Define property *Identify the classifications of property *State the different ways of acquiring property *Differentiate the various ways of holding ownership to property	Test/Quizzes Projects
1304	Explain the importance of confidentiality in the workplace.	Financial & Career Exploration Business Law Business & Management	The types of information and documents that should not be shared	The negative consequences of leaking confidentiial information	Respect confidentiality in the workplace	Business Law Case Studies Employment Law
1305	Compare types of contracts, including related accountability.	Bus & Mktg Essentials Financial & Career Exploration Business Law	Offer and acceptance	*basics of contract formation as found in the matching of a viable offer with proper acceptance	*List the elements required to form a contract *Describe the requirements of an offer *Describe the various ways to end offers * Explain how an offeree can ensure an offer will remain open	Test/Quizzes Projects Student created contracts

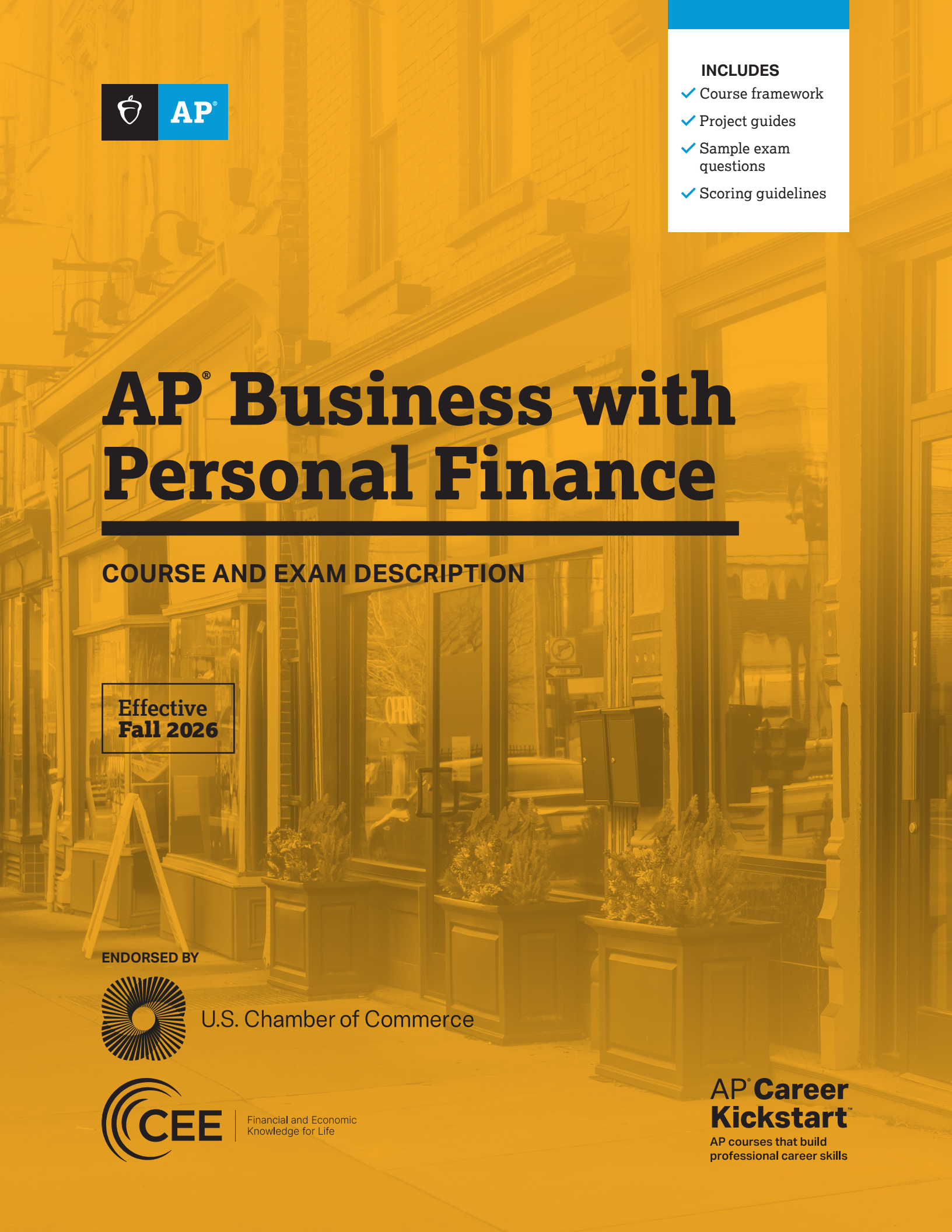
					*Discuss the requirements of an effective acceptance * Determine at what point in time an acceptance is effective	
1306	Identify laws/acts pertaining to business.	Bus & Mktg Essentials Financial & Career Exploration Business Law	Civil law and procedure: private vs public offenses, intentional torts, negligence and strict liability	*distinguishes crimes from torts, presents in depth the major types of torts, and discussion of civil procedure	*Distinguish a crime from a tort *Identify the elements of torts *Explain why one person may be responsible for another's tort *Identify common intentional torts *Recognize the elements of negligence *Explain the basis for strict liability State the legal remedies that are available to a tort victim *Describe the procedure used to try a civil case	Test/Quizzes Projects Employment Law
1307	Display professionalism and workplace integrity.	All Classes	Professionalism is a necessary business skill. Ethical, calm, productive behavior is critical to a successful	How to behave professionally in the workplace.	Demonstrate professionalism in all classes.	Observation & Reflection

			business.			

1400 Office Procedures and Customer Service Communications

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
	RESERVED (1401)					
1402	Demonstrate customer service skills.	Bus & Mktg Essentials Financial & Career Exploration Entrepreneurship I	Providing Personalized Customer Service-Customer Service: customer service, customer survey, word of mouth communication	Strong customer service is good for the business in maintaining a positive environment, good for the customer in making sure they are happy/return, and good for the employee as it gives them control of the situation. Customer service should meet and exceed expectations.	Explain the benefits of strong customer service.	Role plays and reflections
	RESERVED (1403)					
1404	Use face-to-face and remote communication with internal and external customers.	Bus & Mktg Essentials Financial & Career Exploration Entrepreneurship I	Providing Personalized Customer Service-Communicating w/ Customers: professionalism,	Understanding how customer expectations affect the perception of customer service will help retailers provide appropriate levels of	Demonstrate appropriate communication with customers.	Role plays and reflections

			rapport building, active listening, policies, disputes/problems	customer service.		
1405	Develop a rapport with customers.	Bus & Mktg Essentials	Providing Personalized Customer Service- Customer Rapport: rapport, audience	Understanding how customer expectations affect the perception of customer service will help retailers provide appropriate levels of customer service.	Demonstrate rapport building with customers.	Role plays and reflections
1500 Reserved						



INCLUDES

- Course framework
- Project guides
- Sample exam questions
- Scoring guidelines

AP® Business with Personal Finance

COURSE AND EXAM DESCRIPTION

Effective Fall 2026

ENDORSED BY

U.S. Chamber of Commerce

CEE Financial and Economic Knowledge for Life

AP® Career Kickstart™
AP courses that build professional career skills

AP® Business with Personal Finance

COURSE AND EXAM DESCRIPTION

Effective
Fall 2026

AP COURSE AND EXAM DESCRIPTIONS ARE UPDATED PERIODICALLY

Please visit **AP Central** to determine whether a more recent course and exam description is available.

What AP® Stands For

Thousands of Advanced Placement teachers have contributed to the principles articulated here. These principles are not new; they are, rather, a reminder of how AP already works in classrooms nationwide. The following principles are designed to ensure that teachers' expertise is respected, required course content is understood, and students are academically challenged and free to make up their own minds.

1. AP stands for clarity and transparency. Teachers and students deserve clear expectations. The Advanced Placement Program makes public its course frameworks and sample assessments. Confusion about what is permitted in the classroom disrupts teachers and students as they navigate demanding work.
2. AP is an unflinching encounter with evidence. AP courses enable students to develop as independent thinkers and to draw their own conclusions. Evidence and the scientific method are the starting place for conversations in AP courses.
3. AP opposes censorship. AP is animated by a deep respect for the intellectual freedom of teachers and students alike. If a school bans required topics from their AP courses, the AP Program removes the AP designation from that course and its inclusion in the AP Course Ledger provided to colleges and universities. For example, the concepts of evolution are at the heart of college biology, and a course that neglects such concepts does not pass muster as AP Biology.
4. AP opposes indoctrination. AP students are expected to analyze different perspectives from their own, and no points on the AP Exam are awarded for agreement with any specific viewpoint. AP students are not required to feel certain ways about themselves or the course content. AP courses instead develop students' abilities to assess the credibility of sources, draw conclusions, and make up their own minds.

   As the AP English Literature course description states: "AP students are not expected or asked to subscribe to any one specific set of cultural or political values, but are expected to have the maturity to analyze perspectives different from their own and to question the meaning, purpose, or effect of such content within the literary work as a whole."
5. AP courses foster an open-minded approach to the histories and cultures of different peoples. The study of different nationalities, cultures, religions, races, and ethnicities is essential within a variety of academic disciplines. AP courses ground such studies in primary sources so that students can evaluate experiences and evidence for themselves.
6. Every AP student who engages with evidence is listened to and respected. Students are encouraged to evaluate arguments but not one another. AP classrooms respect diversity in backgrounds, experiences, and viewpoints. The perspectives and contributions of the full range of AP students are sought and considered. Respectful debate of ideas is cultivated and protected; personal attacks have no place in AP.
7. AP is a choice for parents and students. Parents and students freely choose to enroll in AP courses. Course descriptions are available online for parents and students to inform their choice. Parents do not define which college-level topics are suitable within AP courses; AP course and exam materials are crafted by committees of professors and other expert educators in each field. AP courses and exams are then further validated by the American Council on Education and studies that confirm the use of AP scores for college credits by thousands of colleges and universities nationwide.

The AP Program encourages educators to review these principles with parents and students so they know what to expect in an AP course. Advanced Placement is always a choice, and it should be an informed one. AP teachers should be given the confidence and clarity that once parents have enrolled their child in an AP course, they have agreed to a classroom experience that embodies these principles.

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About AP

The Advanced Placement® Program (AP®) enables willing and academically prepared students to pursue college-level studies—with the opportunity to earn college credit, advanced placement, or both—while still in high school. Through AP courses in more than 40 subjects, each culminating in a challenging exam, students learn to think critically, construct solid arguments, and see many sides of an issue—skills that prepare them for college and beyond. Taking AP courses demonstrates to college admission officers that students have sought the most challenging curriculum available to them, and research indicates that students who score a 3 or higher on an AP Exam typically experience greater academic success in college and are more likely to earn a college degree than non-AP students. Each AP teacher's syllabus is evaluated and approved by faculty from some of the nation's leading colleges and universities, and AP Exams are developed and scored by college faculty and experienced AP teachers. Most four-year colleges and universities in the United States grant credit, advanced placement, or both on the basis of successful AP Exam scores—more than 3,300 institutions worldwide annually receive AP scores.

AP Course Development

In an ongoing effort to maintain alignment with best practices in college-level learning, AP courses and exams emphasize challenging, research-based curricula aligned with higher education expectations.

Individual teachers are responsible for designing their own curriculum for AP courses, selecting appropriate college-level readings, assignments, and resources. This course and exam description presents the content and skills that are the focus of the corresponding college course and that appear on the AP Exam. It also organizes the content and skills into a series of units that represent a sequence found in widely adopted college textbooks and that many AP teachers have told us they follow in order to focus their instruction. The intention of this publication is to respect teachers' time and expertise by providing a roadmap that they can modify and adapt to their local priorities and preferences.

Enrolling Students: Access, Opportunity, and Readiness

The AP Program welcomes all students willing to challenge themselves with college-level coursework and career preparation. We strongly encourage educators to invite students into AP classes, including students from ethnic, racial, socioeconomic, geographic, or other groups not broadly participating in a school's AP program. We believe that readiness for AP is attainable, and that educators can expand readiness by opening access to Pre-AP course work. We commit to support educators and communities in their efforts to make AP courses widely available, advancing students in their plans for college and careers.

Offering AP Courses: The AP Course Audit

The AP Program unequivocally supports the principle that each school implements its own curriculum that will enable students to develop the content understandings and skills described in the course framework.

While the unit sequence represented in this publication is optional, the AP Program does have a short list of curricular and resource requirements that must be fulfilled before a school can label a course "Advanced Placement" or "AP." Schools wishing to offer AP courses must participate in the AP Course Audit, a process through which AP teachers' course materials are reviewed by college faculty. The AP Course Audit was created to provide teachers and administrators with clear guidelines on curricular and resource requirements for AP courses and to help colleges and universities validate courses marked "AP" on students' transcripts. This process ensures that AP teachers' courses meet or exceed the curricular and resource expectations that college and secondary school faculty have established for college-level courses.

The AP Course Audit form is submitted by the AP teacher and the school principal (or designated administrator) to confirm awareness and understanding of the curricular and resource requirements. A syllabus or course outline, detailing how course requirements are met, is submitted by the AP teacher for review by college faculty.

Please visit the **AP Course Audit** website for more information to support the preparation and submission of materials for the AP Course Audit.

How the AP Program Is Developed

The scope of content for an AP course and exam is derived from an analysis of hundreds of syllabi and course offerings of colleges and universities. Using this research and data, a committee of college faculty and expert AP teachers work within the scope of the corresponding college course to articulate what students should know and be able to do upon the completion of the AP course. The resulting course framework is the heart of this course and exam description and serves as a blueprint of the content and skills that can appear on an AP Exam.

The AP Test Development Committees are responsible for developing each AP Exam, ensuring the exam questions are aligned to the course framework. The AP Exam development process is a multiyear endeavor; all AP Exams undergo extensive review, revision, piloting, and analysis to ensure that questions are accurate, fair, and valid, and that there is an appropriate spread of difficulty across the questions.

Committee members are selected to represent a variety of perspectives and institutions (public and private, small and large schools and colleges), and a range of gender, racial/ethnic, and regional groups. A list of contributing institutions for each subject is available on **AP Central**.

Throughout AP course and exam development, College Board gathers feedback from various stakeholders in both secondary schools and higher education institutions. This feedback is carefully considered to ensure that AP courses and exams are able to provide students with a college-level learning experience and the opportunity to demonstrate their qualifications for advanced placement and/or college credit.

How AP Exams Are Scored

The exam scoring process, like the course and exam development process, relies on the expertise of both AP teachers and college faculty. While multiple-choice questions are scored by machine, the free-response questions and through-course performance assessments, as applicable, are scored by thousands of college faculty and expert AP teachers. Most are scored at the annual AP Reading, while a small portion is scored online. All AP Readers are thoroughly trained, and their work is monitored throughout the Reading for fairness and consistency. In each subject, a highly respected college faculty

member serves as Chief Faculty Consultant and, with the help of AP Readers in leadership positions, maintains the accuracy of the scoring standards. Scores on the free-response questions and performance assessments are weighted and combined with the results of the computer-scored multiple-choice questions, and this raw score is converted into a composite AP score on a 1–5 scale.

AP Exams are **not** norm referenced or graded on a curve. Instead, they are criterion referenced, which means that every student who meets the criteria for an AP score of 2, 3, 4, or 5 will receive that score, no matter how many students that is. The criteria for the number of points a student must earn on the AP Exam to receive scores of 3, 4, or 5—the scores that research consistently validates for credit and placement purposes—include:

- The number of points successful college students earn when their professors administer AP Exam questions to them
- Performance that researchers have found to be predictive of an AP student succeeding when placed into a subsequent higher-level college course
- The number of points college faculty indicate, after reviewing each AP question, that they expect is necessary to achieve each AP grade level

Using and Interpreting AP Scores

The extensive work done by college faculty and AP teachers in the development of the course and exam and throughout the scoring process ensures that AP Exam scores accurately represent students' achievement in the equivalent college course. Frequent and regular research studies establish the validity of AP scores as follows:

AP Score	Credit Recommendation	College Grade Equivalent
5	Extremely well qualified	A
4	Well qualified	A-, B+, B
3	Qualified	B-, C+, C
2	Possibly qualified	n/a
1	No recommendation	n/a

While colleges and universities are responsible for setting their own credit and placement policies, most private colleges and universities award credit and/or advanced placement for AP scores of 3 or higher. Additionally, most states in the U.S. have adopted statewide credit policies that ensure college credit for scores of 3 or higher at public colleges and universities. To confirm a specific college's AP credit/ placement policy, a search engine is available on the **AP Credit Policy Search** page.

BECOMING AN AP READER

Each June, thousands of AP teachers and college faculty members from around the world gather for seven days in multiple locations to evaluate and score the free-response sections of the AP Exams. Ninety-eight percent of surveyed educators who took part in the AP Reading say it was a positive experience.

There are many reasons to consider becoming an AP Reader, including opportunities to:

- **Bring positive changes to the classroom:** Surveys show that the vast majority of returning AP Readers—both high school and college educators—

make improvements to the way they teach or score because of their experience at the AP Reading.

- **Gain in-depth understanding of AP Exam and AP scoring standards:** AP Readers gain exposure to the quality and depth of the responses from the entire pool of AP Exam takers and thus are better able to assess their students' work in the classroom.
- **Receive compensation:** AP Readers are compensated for their work during the Reading. Expenses, lodging, and meals are covered for Readers who travel.
- **Score from home:** AP Readers have online distributed scoring opportunities for certain subjects. Check the **AP Reader** site for details.
- **Earn Continuing Education Units (CEUs):** AP Readers earn professional development hours and CEUs that can be applied to PD requirements by states, districts, and schools.

HOW TO APPLY

Visit the **Become an AP Reader** site for eligibility requirements and to start the application process.

About AP Career Kickstart

AP Career Kickstart courses provide high schools with a new set of AP offerings that prepare students for high-skill, high-growth careers through:

- Instruction in both technical and professional skills
- Emphasis on hands-on, project based learning grounded in authentic scenarios
- Alignment to career and technical education (CTE) and industry standards
- Opportunity to earn an employer-endorsed credential upon achieving a qualifying exam score

Students often recognize the benefits of career exploration while they are still in high school, but many lack access to quality career-focused programs that lead to in-demand jobs. With a proven record of delivering high-quality educational opportunities at scale, the Advanced Placement Program is building AP Career Kickstart courses to ensure nationwide access to outstanding career education that today is only available in some communities.

How AP Career Kickstart Courses Are Developed

Every AP course is designed—and regularly updated—to include current data, evidence, and findings in each discipline. AP courses include the content and skills most frequently taught in introductory college courses, so that students who earn qualifying scores on AP Exams can be placed into upper-division college courses with a strong foundation for success.

AP Career Kickstart courses are built in partnership with industry advisors, higher education faculty, high school educators, and career and technical education (CTE) leaders. These advisors are engaged to evaluate research; recommend course skills, scope, and sequence; and review the course framework and the AP Exam.

Credit and Placement

The AP Program engages faculty from colleges and universities to ensure that AP Career Kickstart courses reflect the academic rigor of introductory college courses in the discipline. Students with qualifying AP Exam scores can earn credit or placement in required or elective courses at colleges and universities.

Credentials and Industry Recognition

The AP Program partners with industry leaders to ensure the course skills align with employer demand for core requirements in high-growth, high-demand jobs. Along with the potential to earn college credit, students with qualifying scores on the AP Exam will earn the AP Career Kickstart Employer-Endorsed Credential. Created in partnership with industry experts, AP Career Kickstart Credentials accelerate students' progress toward in-demand careers and align with the needs of employers, college-level coursework, and secondary CTE programs.

Students can leverage AP Career Kickstart Credentials in their efforts to further their postgraduation plans.

- For students who are considering moving directly to employment after graduation, AP Career Kickstart Credentials can support their applications to internships, apprenticeships, and part- and full-time employment.
- For students who plan to go on to higher education after graduation, two-year and four-year colleges use AP Exam scores to award credit and facilitate placement into associated programs of study.
- Students can list their AP Career Kickstart Credentials on résumés and post them to career-oriented social media platforms.
- After earning AP Career Kickstart Credentials, students are well positioned to earn "stackable" postsecondary and employer-endorsed credentials throughout their education and professional development.

AP Resources and Supports

By completing a simple activation process at the start of the school year, teachers and students receive access to a robust set of classroom resources.

AP Classroom

AP Classroom is a dedicated online platform designed to support teachers and students throughout their AP experience. The platform provides a variety of powerful resources and tools to provide yearlong support to teachers, offering opportunities to give and get meaningful feedback on student progress.

UNIT GUIDES

Appearing in this publication and on AP Classroom, these planning guides outline all required course content and skills, organized into commonly taught units. Each unit guide suggests a sequence and pacing of content, describes how students build skills through the use of business cases and the AP Business Canvas[1] Project, organizes content into topics, and provides tips on preparing students to take the AP Exam.

BUSINESS CASES

Found on AP Classroom, the AP business cases provide engaging, student-friendly case studies featuring a variety of real and fictional businesses. Each case aligns to a course topic and specific course skills. Cases are also accompanied by a teaching note with optional student questions to support classroom instruction. The use of cases as an instructional strategy is a required course component, but the specific AP-provided business cases are not required, nor will they be directly assessed.

1 The Business Canvas Project is a modified Business Model Canvas, which was developed by Strategyzer.com in 2005.

Instructional Model

Integrating AP resources throughout the course can help students develop skills and conceptual understandings. The instructional model outlined below shows possible ways to incorporate AP resources into the classroom.

Plan

Teachers may consider the following approaches as they plan their instruction before teaching each unit.

- Review the overview at the start of each **unit guide** to identify conceptual understandings and skills for each unit.
- Use the **Unit at a Glance** table to identify related topics that build toward a common understanding, and then plan appropriate pacing for students.

Teach

When teaching, supporting resources could be used to build students' conceptual understanding and their mastery of skills.

- Use the topic pages in the **unit guides** to identify the required content.
- Integrate the content with a skill, considering any appropriate scaffolding.
- Employ any of the instructional strategies previously identified.
- Use the available resources, including **business cases** and **Business Canvas Project** applications, to bring a variety of authentic experiences into the classroom.

Assess

Teachers can measure student understanding of the content and skills explored in a unit and provide actionable feedback to students.

- After teaching each topic, offer a formative assessment to check student understanding and provide just-in-time feedback.
- At the end of each unit, create additional practice opportunities that will provide feedback to students on areas where they need to focus.

About the AP Business with Personal Finance Course

AP Business with Personal Finance is an introductory, college-level business and personal finance course. Students explore the business disciplines of entrepreneurship, marketing, finance, accounting, and management through real-world business application, case studies, and project based learning. In addition, students learn and apply all the National Standards for Personal Financial Education created by the Council for Economic Education and the Jump$tart Coalition for Personal Financial Literacy.

AP Career Kickstart, a Group of AP Courses

The "Career Kickstart" designation is awarded to AP courses developed not just with colleges to qualify high school students for college credit, but also with industry leaders and employers, to equip students with the skills needed for specific careers.

College Course Equivalent

The AP Business with Personal Finance course is designed to be the equivalent of a one-semester, college-level introduction to business course.

Prerequisites

There are no specific course prerequisites for AP Business with Personal Finance. Students should be motivated and willing to work both individually and in teams on college-level projects. AP Business with Personal Finance is designed to serve as a foundational course that aligns with multiple Programs of Study within Career and Technical Education (CTE) Business Pathways.

Projects

Through the course, students will apply their learning of business concepts to an entrepreneurial project, the Business Canvas Project. The project will provide students with the opportunity to engage in work-based learning experiences, performing tasks a business founder performs, such as product development, customer research, marketing, and the preparation of financial documents.

The course will culminate with a Financial Advisor Project, in which students will provide financial recommendations to a fictional household based on a fictional financial profile. The recommendation will help the fictional household develop strategies to manage its budget and meet financial goals related to postsecondary education, home buying, retirement, and charitable giving.

Business Cases

Students will develop and practice business decision-making skills through the analysis and discussion of the required business cases used throughout the course. Through business cases, students connect the knowledge and skills they gain in each unit by examining problems and opportunities faced by real-world businesses. While the use of business cases as an instructional strategy is a required course component, teachers may choose to use their own cases in addition to, or in lieu of, those provided by the AP Program.

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AP BUSINESS WITH
PERSONAL FINANCE



Course Framework

Introduction

The AP Business with Personal Finance framework is aligned with content and skills prioritized in college-level introductory business courses as well as the National Standards for Personal Financial Education created by the Council for Economic Education and the Jump$tart Coalition for Personal Financial Literacy. The framework is organized into five units that engage students in key business disciplines—entrepreneurship, marketing, finance, accounting, management, and strategy as well as in personal financial literacy—and integrates key skills throughout the course that students need to be successful in subsequent business courses. The focus of the framework is to support students in their learning of introductory business and personal finance content and skills.

Course Framework Components

Overview

This course framework provides a clear and detailed description of the course requirements necessary for student success. The framework specifies what students must know, be able to do, and understand to qualify for college credit and/or placement.

The course framework includes two essential components:

COURSE SKILLS

Business skills, along with professional and leadership skills, are critical to the understanding and application of business and personal finance content. Students should develop and use these skills throughout the course and through application to their own Business Canvas Project, the Financial Advisor Project, and in the analysis of business cases.

COURSE CONTENT

The course content is organized into units that reflect the key business disciplines of entrepreneurship, marketing, finance, accounting, management, and strategy as well as personal finance. These units comprise the content and skills colleges and universities typically expect students to be proficient in to qualify for college credit and/or placement. Unit 1-4 instruction should take place prior to the AP Exam, as this content will be assessed on the exam. Unit 5 instruction may take place before or after the AP Exam, depending on a school's academic calendar.

Course Skills

The table that follows presents the course skills that students should develop during the AP Business with Personal Finance course. Teachers should provide students with frequent opportunities to practice and develop each of the skills throughout the course.

Business Skills

Skill Category 1	Skill Category 2
Concept Application 1 Explain business and personal finance concepts, principles, and strategies, and apply them to scenarios.	***Entrepreneurship*** 2 Identify a market opportunity, and develop and test a product idea designed to address the opportunity.
1.A Describe business and personal finance concepts, principles, and strategies.	2.A Identify a market opportunity (e.g., a customer problem, need, or want) and develop a product idea to address it.
1.B Interpret quantitative and qualitative business and personal financial data, performing calculations as appropriate.	2.B Formulate and test business hypotheses to iterate and improve on a product idea.
1.C Using business and personal finance concepts and principles, explain how and why businesses and individuals pursue specific goals, strategies, and actions.	2.C Explain the desirability, viability, and/or feasibility of a product idea.

Course Skills (cont'd)

Professional & Leadership Skills

Skill Category 3

Decision Making 3

Describe opportunities or problems, and recommend courses of action to address them.

3.A Describe internal, market, and external factors that affect a business or individual, and explain how and why they create opportunities and/or problems.

3.B Explain how potential courses of action could capitalize on an opportunity or solve a problem for a business or individual.

3.C Establish decision-making criteria and use them to systematically evaluate different courses of action a business or individual may take.

3.D Recommend a decisive course of action for a business or individual, and support the recommendation with persuasive reasoning and evidence.

Skill Category 4

Communication 4

Create authentic communications appropriate for a specific audience and purpose.

4.A Present business and personal financial data (e.g., data visualizations and financial statements) in accurate, precise, and accessible formats targeted for a specific audience and purpose.

4.B Create authentic business communications (e.g., surveys, business canvases, and pitches) that are targeted for a specific audience and purpose.

Skill Category 5

Collaboration 5

Work collaboratively with and lead others to accomplish a goal or task.

5.A Develop clear, shared team objectives related to a business task or project consistent with a vision, mission, and/or goals.

5.B Define clear roles and responsibilities for members of a team working to accomplish a business task or project.

5.C Develop and implement effective strategies to motivate individuals and teams to achieve goals related to a business task or project.

5.D Follow through on agreed-upon deliverables as a part of a team working to accomplish a business task or project.

Course Content

This course framework provides a clear and detailed description of course requirements necessary for student success. The framework specifies what students should know and be able to do, with a focus on business and individual decision making and the internal, market, and external factors that impact business activity and performance as well as individual behavior. The framework also encourages instruction that prepares students for further study across the business disciplines and introduces students to the practices of business case analysis and entrepreneurial thinking.

Units

Units 1-4 in AP Business with Personal Finance and their weightings on the multiple-choice section of the AP Exam can be found in the Exam Information section, starting on p. 237. Unit 5 is designed to be taught either before or after the AP Exam, as appropriate to a school's calendar, and is not assessed on the AP Exam.

Pacing recommendations at the unit level and on the Course at a Glance table are suggestions for how to teach the required course content, integrating business case analysis, Business Canvas Project application, and personal finance content. The suggested class periods are based on a schedule in which the class meets five days a week for 45 minutes each day. While these recommendations have been made to aid in planning, pacing can be adjusted based on student needs, alternate schedules (e.g., block scheduling), or individual schools' academic calendars.

Topics

Each unit is divided into teachable segments called topics. The topic pages (starting on page 27) contain all required content for each topic. Each topic typically requires 3–5 class periods of instruction. Teachers are not obligated to teach the topics in the suggested sequence listed in each unit; however, to receive authorization to label this course "Advanced Placement," all topics must be included in the course.

Course at a Glance

Plan

The course at a glance provides a useful visual organization of the AP Business with Personal Finance components, including:

- Sequence of units, along with approximate weighting and suggested pacing. Please note, pacing is based on 45-minute class periods, meeting five days each week for a full academic year.
- Progression of topics within each unit.

Teach

COURSE SKILLS

Business Skills

1 Concept Application

2 Entrepreneurship

Professional and Leadership Skills

3 Decision Making

4 Communication

5 Collaboration

Assess

At the end of each topic and unit, assess students' understanding of the content and skills and provide them with actionable feedback.

UNIT 1

Businesses, Competition, and New Ideas

~37 CLASS PERIODS | **20–30%** AP EXAM WEIGHTING

	Topic	Business Case
1.1	What Is a Business?	Bombas
1.2	Markets and Competitive Advantage	Incredible Health
1.3	PESTEL Factors and the Business Environment	Corley Plumbing
1.4	How Do Business Ideas Originate?	Malama ia Floral Design
1.5	Vision	Beekeeper's Daughter
1.6	Business Ethics	
1.7	Organization, Roles, and Responsibilities	
1.8	Supply Chains	Pearson 1860

UNIT 2

Marketing

~34 CLASS PERIODS | **20–30%** AP EXAM WEIGHTING

	Topic	Business Case
2.1	Marketing to Customers	Token of Trust
2.2	Consumer Behavior	Gong cha
2.3	Market Research	New Coke
2.4	Product	siggi's
2.5	Price	Sega
2.6	Place and Channels	Stanley
2.7	Promotion and Marketing Communications	Hestia Construction

UNIT 3

PART 1: Personal Saving and Borrowing

~35 CLASS PERIODS

	Topic	Business Case
3.1	Saving for Future Purchases	
3.2	Borrowing, Credit, and Debt	

PART 2: Business Finance and Accounting

25-35% AP EXAM WEIGHTING

	Topic	Business Case
3.3	Accounting and Financial Management	
3.4	Business Expenses	DK Coffee Lab, Part 1
3.5	Financial Capital	DK Coffee Lab, Part 2
3.6	The Income Statement	Hershey
3.7	The Balance Sheet and Net Worth	DCH DK Coffee Lab, Part 3
3.8	The Cash Flow Statement	AANE
3.9	Ethics and Financial Reporting	Yardley

UNIT 4

Management and Strategy

~30 CLASS PERIODS

15–20% AP EXAM WEIGHTING

	Topic	Business Case
4.1	Management and Leadership	Assort Health Canva
4.2	Evaluating Performance Using KPIs	BREAUX Capital
4.3	Strategy and Decision Making	ExpressionMed
4.4	Strategic Frameworks: Porter's Five Forces and SWOT Analysis	Crepes & Waffles Square Meal Feeds

UNIT 5

Personal Goals, Budgeting, and Investing

~24 CLASS PERIODS

+20 CLASS PERIODS FOR ADDITIONAL PERSONAL FINANCE COVERAGE

	Topic	Business Case
5.1	Taxes, Net Income, and Budgeting	
5.2	Managing Personal Risk	
5.3	Saving and Investing for Education, Housing, and Retirement Goals	

AP BUSINESS WITH PERSONAL FINANCE

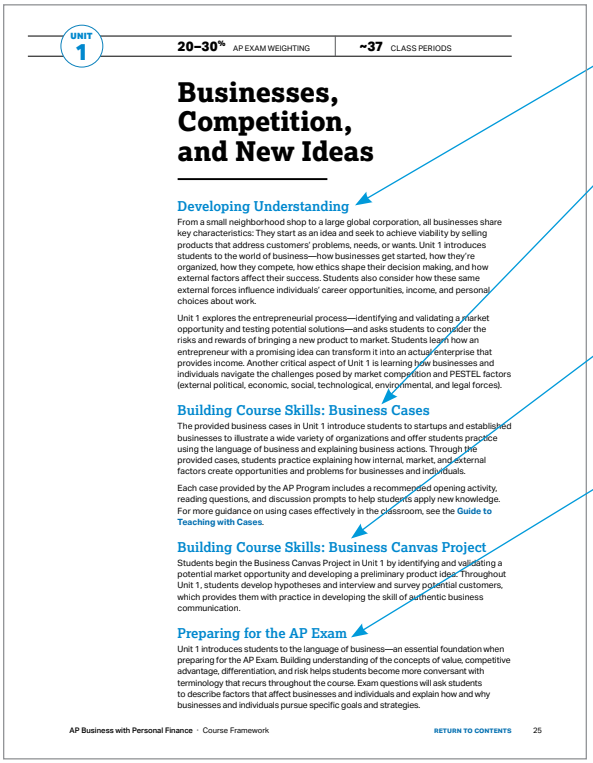
Unit Guides

Introduction

Developed with input from business faculty and experienced high school business and personal finance educators, these guides offer teachers helpful guidance in building students' skills and content knowledge.

This unit structure respects AP teachers' time by providing one possible sequence, which can be adopted or modified rather than having to be built from scratch.

Using the Unit Guides



UNIT 1

20–30% AP EXAM WEIGHTING | ~37 CLASS PERIODS

Businesses, Competition, and New Ideas

Developing Understanding

From a small neighborhood shop to a large global corporation, all businesses share key characteristics: They start as an idea and seek to achieve viability by selling products that address customers' problems, needs, or wants. Unit 1 introduces students to the world of business—how businesses get started, how they're organized, how they compete, how ethics shape their decision making, and how external factors affect their success. Students also consider how these same external forces influence individuals' career opportunities, income, and personal choices about work.

Unit 1 explores the entrepreneurial process—identifying and validating a market opportunity and testing potential solutions—and asks students to consider the risks and rewards of bringing a new product to market. Students learn how an entrepreneur with a promising idea can transform it into an actual enterprise that provides income. Another critical aspect of Unit 1 is learning how businesses and individuals navigate the challenges posed by market competition and PESTEL factors (external political, economic, social, technological, environmental, and legal forces).

Building Course Skills: Business Cases

The provided business cases in Unit 1 introduce students to startups and established businesses to illustrate a wide variety of organizations and offer students practice using the language of business and explaining business actions. Through the provided cases, students practice explaining how internal, market, and external factors create opportunities and problems for businesses and individuals.

Each case provided by the AP Program includes a recommended opening activity, reading questions, and discussion prompts to help students apply new knowledge. For more guidance on using cases effectively in the classroom, see the **Guide to Teaching with Cases**.

Building Course Skills: Business Canvas Project

Students begin the Business Canvas Project in Unit 1 by identifying and validating a potential market opportunity and developing a preliminary product idea. Throughout Unit 1, students develop hypotheses and interview and survey potential customers, which provides them with practice in developing the skill of authentic business communication.

Preparing for the AP Exam

Unit 1 introduces students to the language of business—an essential foundation when preparing for the AP Exam. Building understanding of the concepts of value, competitive advantage, differentiation, and risk helps students become more conversant with terminology that recurs throughout the course. Exam questions will ask students to describe factors that affect businesses and individuals and explain how and why businesses and individuals pursue specific goals and strategies.

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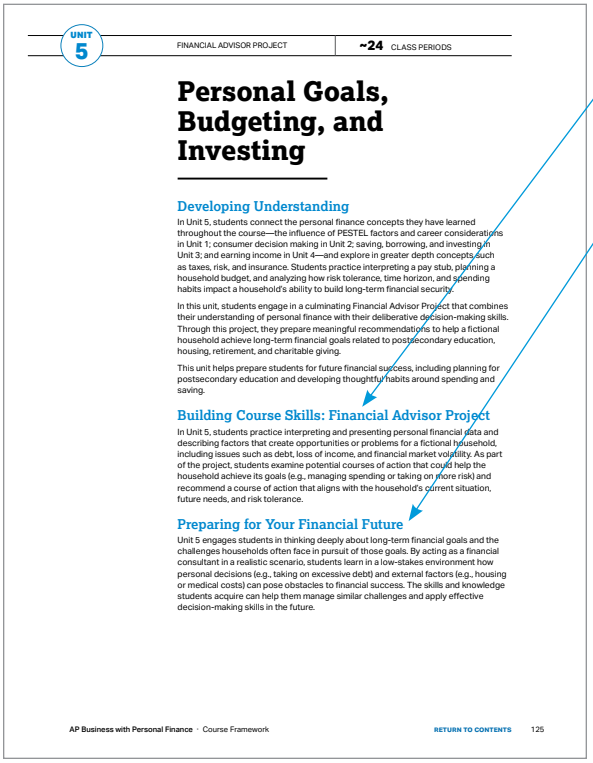
UNIT OPENERS

Developing Understanding provides an overview that contextualizes and situates the key content of the unit within the scope of the course.

Building Course Skills: Business Cases supports skill development by encouraging students to apply business concepts through real-world case analysis, strengthening reasoning, decision-making, and communication skills across the units.

Building Course Skills: Business Canvas Project supports skill development by encouraging students to apply business concepts and skills to an entrepreneurial idea of their own choosing.

Preparing for the AP Exam offers tips and outlines opportunities for students to use business terminology, analyze business cases and scenarios, interpret data, and justify strategic decisions in ways that reflect the expectations of the exam's multiple-choice and free-response questions.



UNIT 5

FINANCIAL ADVISOR PROJECT | ~24 CLASS PERIODS

Personal Goals, Budgeting, and Investing

Developing Understanding

In Unit 5, students connect the personal finance concepts they have learned throughout the course—the influence of PESTEL factors and career considerations in Unit 1; consumer decision making in Unit 2; saving, borrowing, and investing in Unit 3; and earning income in Unit 4—and explore in greater depth concepts such as taxes, risk, and insurance. Students practice interpreting a pay stub, planning a household budget, and analyzing how risk tolerance, time horizon, and spending habits impact a household's ability to build long-term financial security.

In this unit, students engage in a culminating Financial Advisor Project that combines their understanding of personal finance with their deliberative decision-making skills. Through this project, they prepare meaningful recommendations to help a fictional household achieve long-term financial goals related to postsecondary education, housing, retirement, and charitable giving.

This unit helps prepare students for future financial success, including planning for postsecondary education and developing thoughtful habits around spending and saving.

Building Course Skills: Financial Advisor Project

In Unit 5, students practice interpreting and presenting personal financial data and describing factors that create opportunities or problems for a fictional household, including issues such as debt, loss of income, and financial market volatility. As part of the project, students examine potential courses of action that could help the household achieve its goals (e.g., managing spending or taking on more risk) and recommend a course of action that aligns with the household's current situation, future needs, and risk tolerance.

Preparing for Your Financial Future

Unit 5 engages students in thinking deeply about long-term financial goals and the challenges households often face in pursuit of those goals. By acting as a financial consultant in a realistic scenario, students learn in a low-stakes environment how personal decisions (e.g., taking on excessive debt) and external factors (e.g., housing or medical costs) can pose obstacles to financial success. The skills and knowledge students acquire can help them manage similar challenges and apply effective decision-making skills in the future.

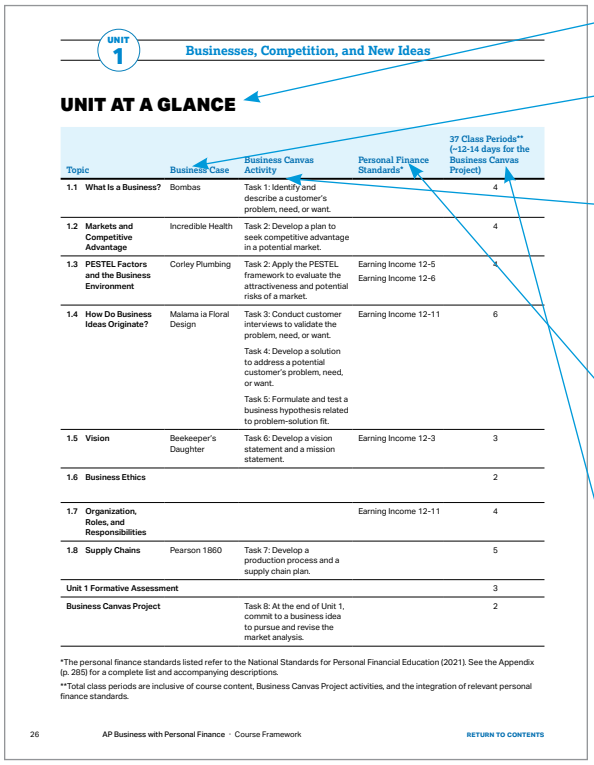
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Unit 5 offers two unit-specific features:

Building Course Skills: Financial Advisor Project encourages students to apply personal finance content and skills as they develop a strategic financial recommendation for a fictional household.

Preparing for Your Financial Future provides insights into how the skills and knowledge acquired in Unit 5 will prepare students to manage similar challenges in their own lives.

Using the Unit Guides



UNIT 1 Businesses, Competition, and New Ideas

UNIT AT A GLANCE

Topic	Business Case	Business Canvas Activity	Personal Finance Standards*	37 Class Periods** (~12-14 days for the Business Canvas Project)
1.1 What Is a Business?	Bombas	Task 1: Identify and describe a customer's problem, need, or want.		4
1.2 Markets and Competitive Advantage	Incredible Health	Task 2: Develop a plan to seek competitive advantage in a potential market.		4
1.3 PESTEL Factors and the Business Environment	Corley Plumbing	Task 2: Apply the PESTEL framework to evaluate the attractiveness and potential risks of a market.	Earning Income 12-5 Earning Income 12-6	4
1.4 How Do Business Ideas Originate?	Malama ia Floral Design	Task 3: Conduct customer interviews to validate the problem, need, or want. Task 4: Develop a solution to address a potential customer's problem, need, or want. Task 5: Formulate and test a business hypothesis related to problem-solution fit.	Earning Income 12-11	6
1.5 Vision	Beekeeper's Daughter	Task 6: Develop a vision statement and a mission statement.	Earning Income 12-3	3
1.6 Business Ethics				2
1.7 Organization, Roles, and Responsibilities			Earning Income 12-11	4
1.8 Supply Chains	Pearson 1860	Task 7: Develop a production process and a supply chain plan.		5
Unit 1 Formative Assessment				3
Business Canvas Project		Task 8: At the end of Unit 1, commit to a business idea to pursue and revise the market analysis.		2

*The personal finance standards listed refer to the National Standards for Personal Financial Education (2021). See the Appendix (p. 285) for a complete list and accompanying descriptions.

**Total class periods are inclusive of course content, Business Canvas Project activities, and the integration of relevant personal finance standards.

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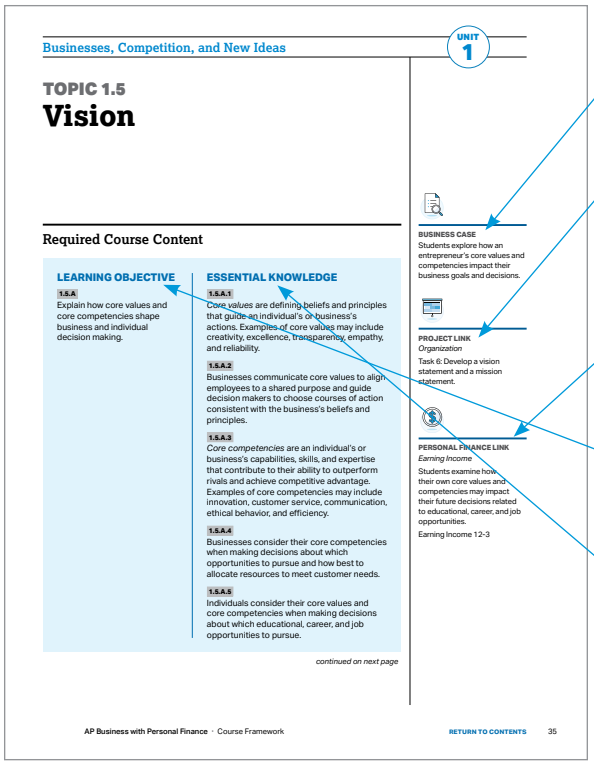
The **Unit at a Glance** table shows the topics and other topic-specific teaching opportunities.

The **Business Case** column lists each available AP-provided business case aligned to a course topic within the unit.

The **Business Canvas Activity** column describes project tasks aligned to each topic within the unit. Each project step involves creating a deliverable, which becomes an element of the final project. All task numbers in this column align to the project guides, starting on pages 143 and 189.

Personal Finance Standards identify each standard from the National Standards for Personal Financial Education aligned to each topic within the unit. A full list of the standards is provided in the Appendix for reference.

Class Periods describe the recommended number of 45-minute class periods to dedicate to each topic within the unit. The recommendation includes the Business Canvas Project activity as well as identified personal finance standards.



Businesses, Competition, and New Ideas UNIT 1

TOPIC 1.5
Vision

Required Course Content

LEARNING OBJECTIVE
1.5.A
Explain how core values and core competencies shape business and individual decision making.

ESSENTIAL KNOWLEDGE
1.5.A.1
Core values are defining beliefs and principles that guide an individual's or business's actions. Examples of core values may include creativity, excellence, transparency, empathy, and reliability.

1.5.A.2
Businesses communicate core values to align employees to a shared purpose and guide decision makers to choose courses of action consistent with the business's beliefs and principles.

1.5.A.3
Core competencies are an individual's or business's capabilities, skills, and expertise that contribute to their ability to outperform rivals and achieve competitive advantage. Examples of core competencies may include innovation, customer service, communication, ethical behavior, and efficiency.

1.5.A.4
Businesses consider their core competencies when making decisions about which opportunities to pursue and how best to allocate resources to meet customer needs.

1.5.A.5
Individuals consider their core values and core competencies when making decisions about which educational, career, and job opportunities to pursue.

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BUSINESS CASE
Students explore how an entrepreneur's core values and competencies impact their business goals and decisions.

PROJECT LINK
Organization
Task 6: Develop a vision statement and a mission statement.

PERSONAL FINANCE LINK
Earning Income
Students examine how their own core values and competencies may impact their future decisions related to educational, career, and job opportunities.
Earning Income 12-3

AP Business with Personal Finance · Course Framework RETURN TO CONTENTS 35

TOPIC PAGES

The **Business Case** note describes how students can engage with a business case to develop a deeper understanding of the topic.

The **Project Link** identifies specific Business Canvas Project steps and deliverables related to the topic, which serve as an opportunity for students to apply their newly acquired knowledge and skills.

The **Personal Finance Link** describes how relevant personal finance standards are addressed within each topic.

Learning objectives define what a student needs to be able to do with content knowledge to progress through the course.

Essential knowledge statements define the required content knowledge associated with each learning objective assessed on the AP Exam.

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AP BUSINESS WITH PERSONAL FINANCE

UNIT 1

Businesses, Competition, and New Ideas



20–30%
AP EXAM WEIGHTING



~37
CLASS PERIODS

UNIT 1

20–30% AP EXAM WEIGHTING | **~37** CLASS PERIODS

Businesses, Competition, and New Ideas

Developing Understanding

From a small neighborhood shop to a large global corporation, all businesses share key characteristics: They start as an idea and seek to achieve viability by selling products that address customers' problems, needs, or wants. Unit 1 introduces students to the world of business—how businesses get started, how they're organized, how they compete, how ethics shape their decision making, and how external factors affect their success. Students also consider how these same external forces influence individuals' career opportunities, income, and personal choices about work.

Unit 1 explores the entrepreneurial process—identifying and validating a market opportunity and testing potential solutions—and asks students to consider the risks and rewards of bringing a new product to market. Students learn how an entrepreneur with a promising idea can transform it into an actual enterprise that provides income. Another critical aspect of Unit 1 is learning how businesses and individuals navigate the challenges posed by market competition and PESTEL factors (external political, economic, social, technological, environmental, and legal forces).

Building Course Skills: Business Cases

The provided business cases in Unit 1 introduce students to startups and established businesses to illustrate a wide variety of organizations and offer students practice using the language of business and explaining business actions. Through the provided cases, students practice explaining how internal, market, and external factors create opportunities and problems for businesses and individuals.

Each case provided by the AP Program includes a recommended opening activity, reading questions, and discussion prompts to help students apply new knowledge. For more guidance on using cases effectively in the classroom, see the **Guide to Teaching with Cases**.

Building Course Skills: Business Canvas Project

Students begin the Business Canvas Project in Unit 1 by identifying and validating a potential market opportunity and developing a preliminary product idea. Throughout Unit 1, students develop hypotheses and interview and survey potential customers, which provides them with practice in developing the skill of authentic business communication.

Preparing for the AP Exam

Unit 1 introduces students to the language of business—an essential foundation when preparing for the AP Exam. Building understanding of the concepts of value, competitive advantage, differentiation, and risk helps students become more conversant with terminology that recurs throughout the course. Exam questions will ask students to describe factors that affect businesses and individuals and explain how and why businesses and individuals pursue specific goals and strategies.

UNIT AT A GLANCE

Topic	Business Case	Business Canvas Activity	Personal Finance Standards*	37 Class Periods** (~12-14 days for the Business Canvas Project)
1.1 What Is a Business?	Bombas	Task 1: Identify and describe a customer's problem, need, or want.		4
1.2 Markets and Competitive Advantage	Incredible Health	Task 2: Develop a plan to seek competitive advantage in a potential market.		4
1.3 PESTEL Factors and the Business Environment	Corley Plumbing	Task 2: Apply the PESTEL framework to evaluate the attractiveness and potential risks of a market.	Earning Income 12-5 Earning Income 12-6	4
1.4 How Do Business Ideas Originate?	Malama ia Floral Design	Task 3: Conduct customer interviews to validate the problem, need, or want. Task 4: Develop a solution to address a potential customer's problem, need, or want. Task 5: Formulate and test a business hypothesis related to problem-solution fit.	Earning Income 12-11	6
1.5 Vision	Beekeeper's Daughter	Task 6: Develop a vision statement and a mission statement.	Earning Income 12-3	3
1.6 Business Ethics				2
1.7 Organization, Roles, and Responsibilities			Earning Income 12-11	4
1.8 Supply Chains	Pearson 1860	Task 7: Develop a production process and a supply chain plan.		5
Unit 1 Formative Assessment				3
Business Canvas Project		Task 8: At the end of Unit 1, commit to a business idea to pursue and revise the market analysis.		2

*The personal finance standards listed refer to the National Standards for Personal Financial Education (2021). See the Appendix (p. 285) for a complete list and accompanying descriptions.

**Total class periods are inclusive of course content, Business Canvas Project activities, and the integration of relevant personal finance standards.

TOPIC 1.1
What Is a Business?

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.1.A Identify ways businesses address customers' problems, needs, and wants.	**1.1.A.1** A *business* is an organization or entity that produces and distributes products, inclusive of goods and/or services. A business can be any size—based on geographic reach, number of employees, or revenues—and serve customers face-to-face or virtually.
	1.1.A.2 A *customer* is an individual or business that purchases a good or service. A *consumer* is an individual who uses a good or service, whether or not they are the buyer.
	1.1.A.3 Businesses identify customer problems, needs, and wants (market opportunities) and develop goods and services to address them, which achieves *problem-solution fit*. Businesses cannot satisfy all potential customers; they must select which problems, needs, and wants they will focus on and which customers to serve.
1.1.B Distinguish between value creation and value capture.	**1.1.B.1** *Value* is the worth or benefit of a product to customers.
	1.1.B.2 Value creation occurs when businesses provide a product that responds to customers' problems, needs, and wants.
	1.1.B.3 Value capture occurs when businesses are able to charge customers a higher price for a product than it cost to produce.



BUSINESS CASE

Students explore how an entrepreneur identifies a customer problem, need, or want.



PROJECT LINK

Customer

Task 1: Identify and describe a customer's problem, need, or want.

TOPIC 1.2

Markets and Competitive Advantage



BUSINESS CASE

Students explore how a business achieves competitive advantage by differentiating its product from competitors' offerings.



PROJECT LINK

Market

Task 2: Develop a plan to seek competitive advantage in a potential market.

Required Course Content

LEARNING OBJECTIVE

1.2.A

Explain how sellers and buyers interact in a market, establishing a market price.

ESSENTIAL KNOWLEDGE

1.2.A.1

Businesses operate within markets, which can be local, regional, or global. A *market* is any physical or virtual space where businesses (the sellers) interact with their customers (the buyers).

1.2.A.2

The voluntary exchange of goods and services within markets generates revenue for sellers and creates value for buyers who obtain products they need or want.

1.2.A.3

Sellers seek to charge higher prices to gain profit, while buyers attempt to pay lower prices to achieve savings.

1.2.A.4

In a competitive market, the interaction of sellers seeking higher prices and buyers seeking lower prices tends to establish a prevailing market price for a good or service.

EXCLUSION STATEMENT

Drawing and manipulating graphs to analyze supply and demand in markets is beyond the scope of the AP Business with Personal Finance Exam but can usefully be introduced to prepare students for the AP Economics courses.

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LEARNING OBJECTIVE

1.2.B
Develop or evaluate a business's plan to achieve competitive advantage in a market.

ESSENTIAL KNOWLEDGE

1.2.B.1
Competitive advantage is the ability to outperform rivals (other businesses) in the same market, leading to increased market share and potentially to increased profits.

1.2.B.2
Markets vary in competitiveness based on the number of rival businesses and product offerings, the degree to which businesses create *differentiated products* (products with distinguishing features), and the extent to which rival businesses are able to offer identical or similar products at a lower price.

1.2.B.3
The competitiveness of a given market determines the strategies a business will use to seek competitive advantage.

1.2.B.4
Markets for many agricultural goods or other commodities tend to be highly competitive. Businesses in these markets may seek competitive advantage by producing as efficiently as possible in order to charge the lowest price possible.

1.2.B.5
In competitive markets with differentiated rival products, businesses may seek competitive advantage by demonstrating to customers how their products are superior to rival products. Businesses may do this by developing higher-quality products, unique product features, better customer service, lower prices, or more effective marketing.

1.2.B.6
Businesses in competitive markets may seek competitive advantage by working to create or strengthen barriers to entry, which are obstacles that make it difficult for new firms to compete. *Barriers to entry* may include intellectual property rights (e.g., patents), regulations to limit rivals, limited access to resource suppliers, high startup costs, and low prices (made possible by operating at a large scale).

1.2.B.7
A market without competition, in which only one business operates and produces a unique good or service, is a *monopoly*. A business that has the advantage of not having to compete for customers may seek to protect this position by maintaining barriers to entry.

TOPIC 1.3

PESTEL Factors and the Business Environment



BUSINESS CASE

Students explore how multiple PESTEL factors impact the viability of a business.



PROJECT LINK

Market

Task 2: Apply the PESTEL framework to evaluate the attractiveness and potential risks of a market.



PERSONAL FINANCE LINK

Earning Income

Students examine how PESTEL factors that impact businesses and markets—such as government policies, economic conditions, societal trends, technology, environmental conditions, and laws—also impact individuals' career opportunities and income.

Earning Income 12-5

Earning Income 12-6

Required Course Content

LEARNING OBJECTIVE

1.3.A
Describe the PESTEL factors that shape markets.

ESSENTIAL KNOWLEDGE

1.3.A.1
PESTEL factors are the political, economic, social, technological, environmental, and legal factors that shape the business landscape and impact the types of business that are viable in a market.

1.3.A.2
Political factors are policies and political dynamics that affect market activity such as trade policy, taxes and subsidies, mandates, bans, and political stability.

1.3.A.3
Economic factors are aspects of the economy that affect market activity such as economic stability, levels of household income, inflation, unemployment, and interest rates.

1.3.A.4
Social factors are trends in society and culture that affect consumers, and therefore market activity, such as consumer demographics, cultural norms, lifestyle trends, and the population growth rate.

1.3.A.5
Technological factors are any features of a market related to the availability of technology for market activity such as internet access, automation of production processes, and the rate of technological innovation.

1.3.A.6
Environmental factors are any external environmental conditions that promote or limit market activity such as geography, access to renewable and nonrenewable resources, waste management policies, and consumer environmental perspectives.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.3.A Describe the PESTEL factors that shape markets.	1.3.A.7 Legal factors are any specific laws, rules, or regulations that impact market activity such as employment laws, consumer protection laws, health and safety laws, environmental regulations, intellectual property protection, and antitrust laws.
1.3.B Explain how PESTEL factors influence business viability and career opportunities in a market.	1.3.B.1 Political factors influence business viability because the overall political system and specific policies incentivize some business activities while disincentivizing others. Subsidies and mandates are used to support specific business activities, while bans are used to limit specific business activities. Taxes are collected to fund governments and may also have the effect of limiting specific business activities. 1.3.B.2 Economic factors influence business viability because the overall stability and performance of the economy influence the levels and types of spending by consumers, businesses, and government. Most businesses are more likely to thrive in a strong, stable economy, but some businesses thrive by meeting customer needs in a weak or unstable economy. 1.3.B.3 Social factors influence business viability because meeting consumer needs and wants is vital to achieving viability for consumer-oriented businesses, and these needs and wants are influenced by consumer demographics, cultural norms, and trends. 1.3.B.4 Technological factors influence business viability because systems for production, distribution, and communication with customers are dependent on available technologies. 1.3.B.5 Environmental factors influence business viability because climate, access to resources, and the occurrence of natural disasters may constrain businesses' abilities to produce and distribute goods and services. In addition, customers' environmental perspectives may influence purchasing decisions.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.3.B Explain how PESTEL factors influence business viability and career opportunities in a market.	**1.3.B.6** Legal factors influence business viability because they affect operating costs and the legality of some operations. **1.3.B.7** Career opportunities in a market can be determined by the types of businesses that are viable, based on how PESTEL factors impact the location. **1.3.B.8** Changes in PESTEL factors may alter the business landscape and job availability within an existing market; for example, some employees face layoffs during economic downturns.
1.3.C Apply the PESTEL framework to evaluate the attractiveness and potential risks of a market.	**1.3.C.1** Businesses evaluate market opportunities using the PESTEL framework, which involves identifying the relevant PESTEL factors and assessing how each relevant factor impacts the attractiveness and potential risks of the market, specific to their product or business idea. **1.3.C.2** A business is more likely to enter a market where PESTEL factors align with its business model, considering resources and production processes as well as potential customers. For example, a tech business is more likely to locate in a market with relatively inexpensive access to high-speed internet and electricity, while a farm-to-table restaurant is more likely to locate in a market with customers who prioritize locally grown food. **1.3.C.3** Changes in PESTEL factors may impact the viability of a business in an existing market because of their influence on customer needs, wants, and ability to buy a product; available production and distribution systems; and access to resources.

TOPIC 1.4

How Do Business Ideas Originate?

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.4.A Describe strategies entrepreneurs and businesses use to generate new product ideas.	**1.4.A.1** An *entrepreneur* is an individual who develops a new business and assumes the risks and potential rewards. **1.4.A.2** Entrepreneurs and existing businesses generate new product ideas using a variety of strategies, such as observing, interviewing, and surveying potential customers to identify needs; investing in market and technical research to identify market gaps; and developing new capabilities through experimentation.
1.4.B Describe the risk involved in bringing a new product to market and the reasons entrepreneurs and existing businesses are willing to incur the risk.	**1.4.B.1** Bringing a new product to market incurs risk because it requires financial, physical, and human resources, which have costs, and there is no guarantee that a new product will generate enough revenue to cover the costs or earn profits. **1.4.B.2** An entrepreneur or existing business may be incentivized to bear the risk of bringing a new product to market by the potential to earn future profits, the satisfaction of solving a problem, or the ability to pursue a passion.

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BUSINESS CASE

Students explore how an entrepreneur identifies and validates a market opportunity and develops a product to capitalize on the opportunity.

PROJECT LINK

Product

Task 3: Conduct customer interviews to validate the problem, need, or want.

Task 4: Develop a solution to address a potential customer's problem, need, or want.

Task 5: Formulate and test a business hypothesis related to problem-solution fit.

PERSONAL FINANCE LINK

Earning Income

Students examine how an entrepreneur can generate income by owning and operating their own business.

Earning Income 12-11

LEARNING OBJECTIVE

1.4.C
Apply an entrepreneurial design-thinking process to the generation and validation of a new business or product idea.

ESSENTIAL KNOWLEDGE

1.4.C.1
An entrepreneurial design-thinking process begins with observing, interviewing, and/or surveying potential customers to identify and validate a problem, need, or want. At this stage, validation means gathering evidence that the problem, need, or want exists, can be clearly defined, and is experienced by multiple potential customers.

1.4.C.2
After an entrepreneur or existing business has identified and validated a problem, need, or want, the entrepreneur or existing business will develop a potential solution (product idea), which may involve brainstorming, sketching, and prototyping.

1.4.C.3
After an initial product idea is developed, the entrepreneur or existing business will validate the idea by gathering initial feedback on a *minimum viable product* (MVP) from potential customers. The MVP is the simplest version of the product idea, with only core features, and may be a sketch, a description, or a model.

TOPIC 1.5
Vision

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.5.A Explain how core values and core competencies shape business and individual decision making.	**1.5.A.1** *Core values* are defining beliefs and principles that guide an individual's or business's actions. Examples of core values may include creativity, excellence, transparency, empathy, and reliability.
	1.5.A.2 Businesses communicate core values to align employees to a shared purpose and guide decision makers to choose courses of action consistent with the business's beliefs and principles.
	1.5.A.3 *Core competencies* are an individual's or business's capabilities, skills, and expertise that contribute to their ability to outperform rivals and achieve competitive advantage. Examples of core competencies may include innovation, customer service, communication, ethical behavior, and efficiency.
	1.5.A.4 Businesses consider their core competencies when making decisions about which opportunities to pursue and how best to allocate resources to meet customer needs.
	1.5.A.5 Individuals consider their core values and core competencies when making decisions about which educational, career, and job opportunities to pursue.

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BUSINESS CASE

Students explore how an entrepreneur's core values and competencies impact their business goals and decisions.



PROJECT LINK

Organization

Task 6: Develop a vision statement and a mission statement.



PERSONAL FINANCE LINK

Earning Income

Students examine how their own core values and competencies may impact their future decisions related to educational, career, and job opportunities.

Earning Income 12-3

Businesses, Competition, and New Ideas

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.5.B Develop or evaluate a vision statement and/or mission statement based on a business's goals and values.	**1.5.B.1** A *vision statement* provides a concise description of a business's core values and aspirations. **1.5.B.2** A *mission statement* provides a description of what a business does and how the business will achieve its long-term goals. **1.5.B.3** Vision statements and mission statements communicate long-term goals and core values to internal audiences to guide decision making and provide a shared sense of purpose. These statements also inform potential customers and investors of the business's goals and values.
1.5.C Describe the goals of businesses, social enterprises, and nonprofit organizations.	**1.5.C.1** Businesses seek to achieve and increase profits, fulfill their stated missions and goals, and remain competitive and viable in the long term. Businesses can improve profits by increasing revenues and/or by decreasing costs. **1.5.C.2** Some businesses seek to generate profit while also achieving social objectives; these businesses are designated social enterprises. The impact on societal challenges may be achieved through a business's products, operations, or financial model. **1.5.C.3** Nonprofit organizations serve the public good rather than generating profit for their owners. Any surplus funds (i.e., revenues in excess of costs) must be reinvested in the organization by law. Nonprofits often rely on grant funding and donations as part of their revenue.

TOPIC 1.6
Business Ethics

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.6.A Explain how and why businesses encourage ethical behavior.	**1.6.A.1** Unethical behavior, such as falsifying or concealing information, misusing company property, and causing harm to employees or customers, can occur at all levels of business; incentive structures can influence individuals' choices to gain benefits for themselves unethically.
	1.6.A.2 Businesses can encourage ethical behavior by implementing codes of conduct, training employees to follow ethical guidelines, imposing internal repercussions for ethical transgressions, and modeling ethical behavior.
	1.6.A.3 Ethical business practices can also attract both customers and employees and contribute to brand loyalty. A business's response to unethical behavior or an ethical dilemma may affect customer and employee relationships, public perception of the business, and profitability.
1.6.B Explain how business leaders respond to ethical dilemmas.	**1.6.B.1** Ethical dilemmas in business exist when a core value, such as transparency, fairness, and empathy, conflicts with other core values or with business goals or practices.

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LEARNING OBJECTIVE

1.6.B
Explain how business leaders respond to ethical dilemmas.

ESSENTIAL KNOWLEDGE

1.6.B.2
Business leaders facing ethical dilemmas often consider the impact of potential responses on various internal and external stakeholders, as well as the impact on reputation and company culture.

1.6.B.2.i
Internal stakeholders are individuals or groups in a business who have a direct involvement in its operations, decisions, and outcomes. Owners, managers, and employees are examples of internal stakeholders.

1.6.B.2.ii
External stakeholders are individuals or groups that are not directly employed by or involved in an organization but have a vested interest in its decisions and outcomes. Customers, government agencies, and community members may be considered external stakeholders.

1.6.B.3
To respond to an ethical dilemma, business leaders often evaluate the benefits and costs of potential responses for each stakeholder group and choose the course of action that results in the greatest total benefit or the least total harm. Alternatively, business leaders may choose a course of action that is most consistent with the business's vision and/or goals.

TOPIC 1.7

Organization, Roles, and Responsibilities

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.7.A Describe the major types of business organization and their relative advantages and disadvantages.	**1.7.A.1** The major types of business organization are sole proprietorship, partnership, limited liability company (LLC), and corporation. **1.7.A.2** A business owner can retain control over decision making and profits by organizing their business as a sole proprietorship, partnership, or LLC; however, they may be limited in their ability to grow the business because these types of businesses have less access to funding. **1.7.A.3** Sole proprietors and partners are personally liable for all business debts and obligations; however, they can avoid personal liability for business debts by organizing as LLCs. **1.7.A.4** Business owners cede control over decision making to shareholders and an elected board of directors when a business becomes a corporation; corporations typically have greater access to funding and more ability to grow than other types of business, and the company rather than individual owners controls profits and is liable for business debts.

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PERSONAL FINANCE LINK

Earning Income

Students examine how a business owner in a sole proprietorship, partnership, or limited liability company generates income from their business, and explore business roles and career opportunities within business.

Earning Income 12-4

Earning Income 12-11

Businesses, Competition, and New Ideas

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.7.B Define the roles and responsibilities of sole proprietors and partners.	**1.7.B.1** Sole proprietors have primary responsibility for all aspects of their businesses and may play multiple roles, including chief executive officer (CEO), marketer, product developer, financial manager, and operations manager.
	1.7.B.2 Partners have primary responsibility for all aspects of their business and play multiple roles, which are typically divided according to each partner's strengths and interests.
1.7.C Explain how and why large businesses organize responsibilities into a structure that includes leadership and management of specialized departments as well as outsourcing.	**1.7.C.1** As a business grows in size and complexity, managing all aspects of it requires more employees with specific skills, which leads many businesses to organize roles and responsibilities into specialized departments (or teams).
	1.7.C.2 Many large businesses employ executive leaders (e.g., CEOs) who are responsible for the overall vision, operations, strategy, and performance of the business as well as managers who lead the specialized departments and report to the executive leaders. In a corporation, the executive leaders report to the board of directors and shareholders.
	1.7.C.3 Specialized departments are responsible for functional areas of business and develop expertise in these areas, which improves a business's ability to meet customer needs and wants efficiently and effectively.
	1.7.C.4 Businesses may outsource functions to other businesses when doing so is likely to increase efficiency or reduce costs. For example, a business may outsource functions when it lacks employees with specific skills or when existing labor costs are high.

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LEARNING OBJECTIVE

1.7.D
Describe the roles, responsibilities, and purposes of specialized departments in a business.

ESSENTIAL KNOWLEDGE

1.7.D.1
Sales and marketing departments conduct market research, develop sales strategies, manage brands, and build customer relationships to attract and retain customers.

1.7.D.2
Research and development departments innovate around new and existing goods, services, and processes to better meet customers' needs and wants.

1.7.D.3
Operations departments manage the technical process of manufacturing goods or developing services to get the business's products to customers.

1.7.D.4
Accounting departments track expenditures and earnings and prepare financial statements to monitor the financial health of a business.

1.7.D.5
Finance departments secure and manage the use of funds and use financial data to recommend strategies for improving a business's performance.

1.7.D.6
Human resources departments recruit, train, and oversee the evaluation of employees to ensure that a business has a workforce with the knowledge, skills, and abilities to produce and provide the product, market to customers, make sales, and manage finances.

TOPIC 1.8
Supply Chains



BUSINESS CASE

Students explore how a business evaluates supply chain decisions by considering cost, risk, and impact on competitive advantage strategy.



PROJECT LINK

Operations

Task 7: Develop a production process and a supply chain plan.

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.8.A Describe factors businesses consider when developing a production process.	**1.8.A.1** Businesses establish processes for producing and distributing their goods and/or services. Some businesses that produce goods choose *artisan processes*, which require skilled labor and attention to detail, while others choose *mass-production processes*, which typically require technology, assembly lines, and machinery to produce a larger quantity of goods. **1.8.A.2** Businesses consider customer priorities, such as quality, price, and customization, as well as the business's core competencies and the competitive landscape when developing production processes.
1.8.B Develop or describe a supply chain plan for a product.	**1.8.B.1** Businesses connect all of the individuals and businesses involved at each stage of the production and distribution process—from acquiring raw materials to final customer delivery—through *supply chains*, which may be local, regional, or global. Supply chains for goods differ from supply chains for services. **1.8.B.2** In the supply chain for a good, raw materials and component parts (e.g., computer chips) are acquired and transported to manufacturing facilities, where they are made into finished goods by a combination of workers and equipment. Goods may then be transported to a storage facility, such as a warehouse, before going to a distribution center or retail store for distribution to customers.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
1.8.B Develop or describe a supply chain plan for a product.	**1.8.B.3** In the supply chain for a service, businesses acquire the employees, resources, and delivery systems needed to provide the service to customers either in person or virtually. **1.8.B.4** Businesses consider cost, quality, efficiency, convenience, and risk when choosing suppliers. Risks such as natural disasters, political instability, resource shortages, production errors, and supplier reputation may delay product delivery or increase costs, threatening competitive advantage and profits.
1.8.C Explain how a business's competitive advantage strategy influences supply chain decisions.	**1.8.C.1** Businesses seeking competitive advantage through low prices typically use mass production and build supply chains focused on reducing costs, for example, through the use of cheaper resources and more efficient production processes. Some businesses *scale* their operations—building new, higher-capacity, and/or more efficient supply chains designed to achieve revenue increases that are greater than cost increases. **1.8.C.2** Businesses seeking competitive advantage through the provision of high-quality goods and services, whether through artisan or mass-production processes, build supply chains that use high-quality resources and production methods. **1.8.C.3** Businesses seeking competitive advantage through barriers to entry build supply chains that include exclusive or restrictive agreements with suppliers or distributors; for example, agreements that prevent a supplier from selling component parts to rivals or prevent a retailer from distributing rival products.

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AP BUSINESS WITH PERSONAL FINANCE

UNIT 2

Marketing



20–30%
AP EXAM WEIGHTING



~34
CLASS PERIODS

UNIT 2

20–30% AP EXAM WEIGHTING | **~34** CLASS PERIODS

Marketing

Developing Understanding

Every year, businesses bring thousands of new products to market that must compete for customer attention and spending. Some products will succeed or even dominate their markets, while others quietly disappear. What's the difference between a successful launch and a product failure? Unit 2 introduces students to marketing—the process of developing products and motivating customers to buy them—and examines how businesses use market research and data to select target customers, understand customer preferences and behaviors, improve products, and develop strategies that drive sales.

Unit 2 also introduces the consumer perspective—how purchasing patterns, sales tactics, and factors such as peer influence and personal values can influence individual buying decisions.

Building Course Skills: Business Cases

The provided business cases in Unit 2 introduce students to new and established businesses at key decision points. Businesses must grapple with a variety of marketing decisions, such as "Should we change our product to appeal to more customers?" and "How can we use pricing strategy to grow market share?" Students practice applying the language of business, interpreting market data, explaining how businesses address problems and opportunities, and explaining how businesses pursue and achieve the goals of desirability, feasibility, and viability.

Each case provided by the AP Program includes a recommended opening activity, reading questions, and discussion prompts to help students apply new knowledge. For more guidance on using cases effectively in the classroom, see the **Guide to Teaching with Cases**.

Building Course Skills: Business Canvas Project

In Unit 2, while developing their Business Canvas Project, students apply marketing techniques, including creating a target customer profile, developing and testing hypotheses related to customer preferences, and creating a minimum viable product, a value proposition, and branding. Students learn to communicate using data visualizations and authentic business messaging to inform, persuade, and learn from customers.

Preparing for the AP Exam

Unit 2 introduces students to market research and the use of data to inform marketing decisions, preparing them for AP Exam questions that are accompanied by quantitative and qualitative data requiring interpretation. The Business Concept Application free-response question (FRQ) will ask students to examine information gathered by a business, describe the method used, and explain how the research findings can be used to further the business's goals. The Business Canvas Project Exam-Day Validation FRQ will ask students to explain how they used hypothesis testing to inform decision making during their Business Canvas Project.

UNIT AT A GLANCE

Topic	Business Case	Business Canvas Activity	Personal Finance Standards*	34 Class Periods** (~13-15 days for the Business Canvas Project)
2.1 Marketing to Customers	Token of Trust	Task 1: Identify target customers and develop a customer profile. Task 2: Develop a plan to build customer relationships.	Managing Risk 12-11	4
2.2 Consumer Behavior	Gong Cha	Task 2: Develop a sales tactic drawing on principles of persuasion.	Spending 12-2 Spending 12-3 Spending 12-4 Spending 12-5 Spending 12-8	4
2.3 Market Research	New Coke	Task 3: Conduct primary source research to test a hypothesis related to customers' preferences. Task 4: Conduct secondary source research to assess the competitive landscape. Task 4: Develop a data visualization that reflects research findings.		6
2.4 Product	siggi's	Task 5: Develop a minimum viable product (MVP), to assess product-market fit, a value proposition, and branding/brand identity.		4
2.5 Price	Sega	Task 6: Develop a pricing strategy.		5
2.6 Place and Channels	Stanley	Task 7: Select a potential marketing channel or channels.		4
2.7 Promotion and Marketing Communications	Hestia Construction	Task 8: Develop a marketing campaign, including digital marketing tools.		4
Unit 2 Formative Assessment				3

*The personal finance standards listed refer to the National Standards for Personal Financial Education (2021). See the Appendix (p. 285) for a complete list and accompanying descriptions.

**Total class periods are inclusive of course content, Business Canvas Project activities, and the integration of relevant personal finance standards.

TOPIC 2.1
Marketing to Customers

Required Course Content

LEARNING OBJECTIVE

2.1.A
Explain why and how marketers collect customer data.

ESSENTIAL KNOWLEDGE

2.1.A.1
Marketing is all of the activities businesses undertake to identify customers' problems, needs, and wants as well as to promote, sell, and deliver products.

2.1.A.2
Customer data helps marketers determine which customers a business should serve, which products to produce, and how to market products effectively and profitably.

2.1.A.3
Marketers collect a wide variety of data pertaining to customers. This data includes demographic and psychographic characteristics.

2.1.A.3.i
Demographic characteristics are measurable qualities used to describe a population, such as age, sex, race, ethnicity, income, and location.

2.1.A.3.ii
Psychographic characteristics are cognitive and behavioral factors within a population including individuals' interests, activities, values, and lifestyles.

2.1.A.4
Businesses collect customer data using a variety of digital tools, including subscriber lists, online accounts, click-tracking software, tracking apps, and social media monitoring, as well as through traditional research tools, such as surveys and interviews. Businesses also buy customer data from other businesses.

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BUSINESS CASE
Students explore how a business determines its target customer and develops a customer profile.



PROJECT LINK
Customer

Task 1: Identify target customers and develop a customer profile.

Task 2: Develop a plan to build customer relationships.



PERSONAL FINANCE LINK
Managing Risk

Students examine how businesses' collection and use of customer data can leave individuals vulnerable to privacy infringement, identity theft, and fraud.

Managing Risk 12-11

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.1.B Use market segmentation to identify target customers and develop a customer profile.	**2.1.B.1** Market segmentation is a way to aggregate potential customers into groups, called *market segments*, based on shared demographic and psychographic characteristics. Market segmentation helps businesses better understand the needs and wants of different groups within a market and how their products might address these needs and wants.
	2.1.B.2 Businesses use market segmentation to identify *target customers*—those buyers most likely to purchase a specific product because of their wants, needs, and preferences.
	2.1.B.3 A business may create customer profiles to personify its target customers. A *customer profile* is a fictional description of a specific sample customer, incorporating demographic and psychographic data as well as the individual's wants, needs, and preferences.
	2.1.B.4 Identifying target customers and developing customer profiles helps businesses design products and marketing elements (e.g., branding, pricing, and advertising) that appeal to the targeted customer population, which is typically more effective and less costly than appealing to a wide audience.
2.1.C Describe the purpose of building customer relationships and develop a plan to build customer relationships.	**2.1.C.1** Businesses use a variety of tactics to build strong customer relationships, including personalized service, rewards programs for frequent buyers, and customer feedback opportunities (e.g., satisfaction surveys). Social media and the internet make it easier for businesses to employ these tactics.
	2.1.C.2 Strong customer relationships can reduce customer acquisition cost, potentially increasing profits, because satisfied customers may refer new customers. Customer acquisition cost is calculated by dividing the total marketing, advertising, and sales costs associated with acquiring customers by the total number of customers.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.1.C Describe the purpose of building customer relationships and develop a plan to build customer relationships.	**2.1.C.3** Strong customer relationships can increase the lifetime value of each unique customer, potentially increasing profits, because satisfied customers have more brand loyalty and make repeat purchases. The lifetime value of a customer is the estimated amount of money that the customer will spend on the business's products over time.
2.1.D Explain how the collection and use of customer data may make customers vulnerable to privacy infringement, identity theft, and fraud and create risks for businesses.	**2.1.D.1** Collecting, compiling, and storing customer data such as consumers' online searches, purchases of goods and services, credit card numbers, social media posts, and geographic location may violate consumers' privacy, particularly when consumers are unaware that their data is being collected or uninformed about how it may be used. **2.1.D.2** Customer data that is not properly secured may make individual consumers or businesses vulnerable to data breaches, fraud, and identity theft. **2.1.D.3** Businesses that collect, compile, store, and use customer data must balance the benefits of using this data against the potential risks to the business, including loss of customers, violation of core values, and harm to the business's reputation.

TOPIC 2.2
Consumer Behavior



BUSINESS CASE

Students explore how a business uses its understanding of consumer decision making to develop effective marketing strategies and sales tactics.



PROJECT LINK

Customer

Task 2: Develop a sales tactic drawing on principles of persuasion.



PERSONAL FINANCE LINK

Spending

Students examine the factors that shape consumer spending decisions, including the consumer's budget, the product price and features, the availability and prices of alternative products, and the costs and benefits of using a rational process to systematically evaluate alternatives.

Spending 12-2

Spending 12-3

Spending 12-4

Spending 12-5

Spending 12-8

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.2.A Explain why and how consumers make buying decisions.	**2.2.A.1** Consumers buy goods and services to meet basic needs and wants. When rival goods that meet the same needs and wants are available, consumer decisions regarding which products to buy are influenced by prices, differentiated product features, availability, and advertising.
	2.2.A.2 Consumers make some buying decisions, especially consequential ones like a home purchase, using a rational process of systematically evaluating alternative products, but many smaller buying decisions, such as buying a coffee on the way to work, are habitual or routine. A rational decision-making process helps consumers identify products that best address their needs and wants but also incurs costs, including time spent gathering information.
	2.2.A.3 Personal factors, such as age, sex, education, income level, budget, occupation, and lifestyle, shape buying decisions by influencing what a consumer needs and wants and what they can afford.
	2.2.A.4 Psychological factors, such as values and beliefs, perceptions, learning (associations developed through prior experience), and individual motivations, shape consumer buying decisions by influencing their attitudes toward products and their willingness to buy.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.2.A Explain why and how consumers make buying decisions.	**2.2.A.5** Social and cultural factors, such as peers, family, social status, cultural norms, and media, shape consumer buying decisions by influencing what is acceptable, desirable, or appropriate to buy. **2.2.A.6** Situational influences, such as store design (noise, lighting, and organization), timing, and product availability, influence consumer buying decisions by creating temporary conditions that can encourage or discourage buying.
2.2.B Describe the impact of legal and technological factors on consumer purchasing patterns.	**2.2.B.1** A *purchasing pattern* is a consumer's typical routine for making purchases, including timing, frequency, and quantity of purchases. Factors such as where an individual lives and works, their income level, and the purchasing patterns of their family and friends help determine their purchasing patterns. **2.2.B.2** Laws influence consumer purchasing patterns when they regulate what consumers can buy and when and where they can buy specific items. Consumer protection laws, for example, are designed to help individuals avoid fraudulent products and/or products that may be unsafe for them. These legal factors can give rise to substitute products, as consumers find new ways to address their needs and wants when existing products are more difficult to obtain. **2.2.B.3** Technology and innovation make new products accessible, which influences consumer purchasing patterns. For example, the internet in the 1990s and the advent of smartphones in the 2010s both facilitated new ways of shopping, finding information, and accessing entertainment, which changed how customers met their needs and wants.

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LEARNING OBJECTIVE

2.2.C
Evaluate sales tactics that draw upon Cialdini's principles of influence, and develop a sales tactic.

ESSENTIAL KNOWLEDGE

2.2.C.1
The principles of influence, developed by psychologist Robert Cialdini, are psychological factors that cause people to comply with a request. Marketers use tactics based on these principles to motivate consumers to buy products.

2.2.C.2
Cialdini's scarcity principle states that the rarer an item seems, the more people tend to want it. Marketers apply this principle to motivate consumers by using phrases such as "limited-time offer" or "only one left at this price" to create a sense of urgency.

2.2.C.3
Cialdini's authority principle states that individuals tend to obey or follow authority figures. Marketers apply this principle to motivate consumers by using expert spokespeople, such as doctors, to endorse products or by emphasizing the credentials of service providers.

2.2.C.4
Cialdini's consensus principle states that individuals tend to follow social-group norms. Marketers apply this principle to motivate consumers by promoting positive customer feedback to create a sense that most consumers like a product.

2.2.C.5
Cialdini's liking principle states that individuals are more likely to be influenced by people they like or relate to. Marketers apply this principle to motivate consumers by featuring people who look and act like the target customer in advertising and by building personal rapport with consumers.

2.2.C.6
Cialdini's reciprocity principle states that individuals feel obligated to reciprocate when given something of value. Marketers apply this principle to motivate consumers by offering free trials, samples, and gifts, which can make the recipient feel compelled to buy something in return.

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LEARNING OBJECTIVE

2.2.C

Evaluate sales tactics that draw upon Cialdini's principles of influence, and develop a sales tactic.

ESSENTIAL KNOWLEDGE

2.2.C.7

Cialdini's consistency principle states that individuals tend to repeat behavior that aligns with their self-image. Marketers apply this principle to motivate consumers by appealing to their identity; for example, by promoting a product as something health-conscious consumers buy.

2.2.C.8

Cialdini's unity principle states that when individuals perceive that they are part of a group, they are more likely to be influenced by the group. Marketers apply this principle to motivate consumers by building a sense of community among target customers; for example, by asking them to join an exclusive online group or inviting them to cocreate products.

TOPIC 2.3
Market Research



BUSINESS CASE

Students explore how a business conducts market research and uses the findings to inform decision making.



PROJECT LINK

Customer

Task 3: Conduct primary source research to test a hypothesis related to customers' preferences.

Market

Task 4: Conduct secondary source research to assess the competitive landscape.

Appendix

Task 4: Develop a data visualization that reflects research findings.

Required Course Content

LEARNING OBJECTIVE

2.3.A
Explain why businesses conduct market research.

ESSENTIAL KNOWLEDGE

2.3.A.1
Market research is the process of collecting detailed information about markets, products, and customer behavior to guide marketing decisions.

2.3.A.2
Market researchers collect both quantitative and qualitative data.

2.3.A.2.i
Quantitative data is numerical data that can be measured and analyzed and answers questions such as *how many*, *how much*, and *how often*.

2.3.A.2.ii
Qualitative data is descriptive, non-numerical data that is collected in words and images and answers questions such as *why* and *how*.

2.3.A.3
Businesses developing new products use market research to evaluate the desirability, feasibility, and viability of a product before committing significant resources to bring the product to market.

2.3.A.3.i
A product is desirable when it creates value for customers by achieving problem-solution fit.

2.3.A.3.ii
A product is feasible when a business has the capacity to produce and provide it within the constraints of available resources, technology, expertise, and time.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.3.A Explain why businesses conduct market research.	2.3.A.3.iii A product is viable when it has the potential to be profitable in a market. 2.3.A.4 Businesses with existing products use market research to better understand customers' changing needs and wants, identify opportunities for product innovation, and develop strategies to retain or grow market share.
2.3.B Conduct and interpret secondary-source research to assess a market opportunity.	2.3.B.1 Businesses use both secondary-source research and primary-source research to learn about customers, competitors, and the market landscape, including the PESTEL factors influencing market opportunities. 2.3.B.2 Secondary-source research involves gathering quantitative and/or qualitative information from a variety of external sources, including government, commercial, and academic publications and databases. These sources often contain detailed information on a variety of topics including market size (in dollars and in total customers), market trends, market segments, and factors that influence customer decisions, which can inform a business's understanding of the potential viability of its product. 2.3.B.3 Businesses typically interpret secondary-source research findings, including detailed information about rival businesses, to assess the market landscape for a product idea because it is more cost-effective than conducting extensive primary-source research.
2.3.C Conduct and interpret primary-source research to test a business hypothesis related to target customers and/ or customer preferences.	2.3.C.1 Businesses typically test hypotheses related to their target customers and customer preferences by conducting and interpreting primary-source research, including surveys, A/B testing, focus groups, interviews, experiments, and/or observations.

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LEARNING OBJECTIVE

2.3.C

Conduct and interpret primary-source research to test a business hypothesis related to target customers and/ or customer preferences.

ESSENTIAL KNOWLEDGE

2.3.C.2

A business hypothesis states an assumption related to a customer, product, or market. Businesses typically test the validity of their assumptions (hypotheses) before committing to a course of action.

2.3.C.3

When conducting primary-source research, businesses may choose the research method or combination of methods based on the types of data the business needs to test its hypotheses.

2.3.C.4

Businesses may use surveys when they need a large amount of quantitative data that reflects the views of a population in order to test a hypothesis.

2.3.C.5

Businesses may use focus groups and one-on-one interviews when they need in-depth, qualitative data from a small number of individuals, such as highly engaged customers or potential customers, in order to test a hypothesis. These methods allow for follow-up questions and discussions that elicit detailed explanations.

2.3.C.6

Businesses may use experiments and observations when they need data on customer behavior, rather than opinions, in order to test a hypothesis. These methods allow researchers to gather information about how customers behave in either a controlled environment (in an experiment) or a natural environment (in an observation).

2.3.C.7

Businesses may use A/B testing (a type of experiment) when they need to measure authentic customer responses to two viable alternatives in order to test a hypothesis. This method allows researchers to gather information about specific customer preferences in a real-world environment.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.3.C Conduct and interpret primary-source research to test a business hypothesis related to target customers and/ or customer preferences.	**2.3.C.8** Businesses should take care to implement hypothesis testing in ways that reduce the risk of skewed data—both by designing research studies with sufficiently large and appropriately populated samples to reflect the population being studied and by asking unbiased questions that use neutral phrasing to avoid influencing the way respondents answer. **2.3.C.9** Despite the use of market research to inform decisions, businesses are not always able to accurately predict customer and market responses. Businesses often must innovate and respond to problems and opportunities using limited, unclear, or contradictory data.
2.3.D Develop and interpret data visualizations that reflect market research findings.	**2.3.D.1** Businesses may use a variety of data visualization tools to identify and communicate patterns, trends, and insights. Data visualizations such as bar charts, stacked bar charts, line graphs, and pie charts make it easier for stakeholders to understand complex information and make evidence-based decisions. **2.3.D.2** Businesses select the data visualization tool that best illustrates the pattern, trend, or insight they want to communicate. **2.3.D.3** Bar charts are often used to illustrate comparisons between individual data points, such as several years of sales data for a specific business or annual revenue for different businesses in a market. **2.3.D.4** Stacked bar charts are often used to illustrate comparisons between data and its subcategories. For example, a single stacked bar chart may show how total sales per year have changed as well as how sales for distinct product lines have changed over the same time period. **2.3.D.5** Line graphs are often used to illustrate trends over time, such as number of customers by year. **2.3.D.6** Pie charts are often used to illustrate part-to-whole relationships, such as the percentage of market share held by each business in a market.

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TOPIC 2.4
Product



BUSINESS CASE

Students explore how an entrepreneur takes an idea through the product development process, from the ideation stage to product launch.



PROJECT LINK

Product

Task 5: Develop a minimum viable product (MVP) to assess product-market fit, a value proposition, and branding/ brand identity.

Required Course Content

LEARNING OBJECTIVE

2.4.A

Describe the six typical stages of product development, and develop an MVP and value proposition.

ESSENTIAL KNOWLEDGE

2.4.A.1

Product development is the process of creating or improving a product through research and iteration. Product development typically includes six stages: ideation, validation, design, messaging, production, and launch.

2.4.A.2

The ideation stage focuses on generating ideas for new or improved products through market research, technical research and development (R&D), and brainstorming.

2.4.A.3

The validation stage focuses on testing product ideas with potential customers. Marketers may use an MVP (minimum viable product) to assess whether a product can achieve *product-market fit*, which occurs if customer demand is sufficient to generate profit.

2.4.A.4

The design stage focuses on sourcing materials, creating prototypes, and estimating production and delivery costs. Developers determine key product features, such as functionality (how the product works), the user experience, and basic attributes like size, color, and quality. Businesses gather feedback on prototypes to understand who is likely to buy the product and how they respond to specific features.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.4.A Describe the six typical stages of product development, and develop an MVP and value proposition.	**2.4.A.5** The messaging stage focuses on creating a product's overall marketing strategy. Businesses develop a *value proposition* to explain who the product intends to serve, what problem or need it intends to address, and how it is superior to alternatives, based on market research insights. Businesses also develop *product-positioning strategies* to influence how potential customers perceive a product relative to rivals. **2.4.A.6** The production stage focuses on building the product, incorporating feedback received during the design stage. Businesses determine the production process and supply chain and attempt to match production levels with customer demand. **2.4.A.7** The launch stage focuses on taking orders and distributing a final product to customers. Businesses begin marketing the product to the target segment.
2.4.B Develop and evaluate branding for a business or product.	**2.4.B.1** Branding is the process of developing an identity, or brand, for a business or product, which is used to distinguish it from competitors, raise customer awareness, and generate loyalty. **2.4.B.2** Businesses typically consider their vision and/or the value proposition for a product when developing a brand identity to ensure that the brand appeals to the target customer. For example, a business that includes quick delivery in its value proposition may develop a brand identity that conveys a sense of movement or urgency. **2.4.B.3** A brand identity can be conveyed through a name, idea, term, symbol, design, or combination of these elements, which businesses often seek to protect by trademarking. **2.4.B.4** In addition to marketing products under brand names, businesses may sell generic products because some customers prioritize cost savings, which are associated with generic goods, over branding.

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Marketing

LEARNING OBJECTIVE

2.4.C
Explain how businesses adapt their marketing strategies to address competitive challenges throughout the product life cycle.

ESSENTIAL KNOWLEDGE

2.4.C.1
The *product life cycle* is a series of stages that a product passes through, from introduction (the culmination of the product development stages) to decline, dictated by changes in customer demand over time.

2.4.C.2
At each stage of the product life cycle, businesses adapt the focus of their marketing strategies to address competitive challenges and attempt to grow or retain market share.

2.4.C.3
During the introduction stage of the product life cycle, a business launches a new product and sales volume and revenue are typically low; marketing strategy focuses on tactics to raise brand awareness to generate initial customer demand.

2.4.C.4
A product enters the growth stage when sales volume and revenue grow at an increasing rate and production typically increases. Competitors often enter the market and, consequently, marketing strategy focuses on tactics to differentiate the product from rival products, improve product quality, promote the brand, and advertise to promote growth.

2.4.C.5
A product enters the maturity stage when sales volume and revenue flatten, and the business seeks to retain existing market share by building brand loyalty in a saturated market. Marketing strategy during the maturity stage focuses on continued product differentiation, lower prices, and innovation.

2.4.C.6
A product enters the decline stage when sales volume and revenue fall as customers turn to rival products or innovative substitutes. Marketing strategy during the decline stage involves cutting costs or focusing on product redesign to remain viable. Products may be discontinued at this stage.

TOPIC 2.5
Price

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.5.A Develop and evaluate a pricing strategy.	**2.5.A.1** A *pricing strategy* is a way of determining how much to charge for a product; setting the right price is critical to a business's viability because of the role price plays in attracting and retaining customers and generating revenue and profit. **2.5.A.2** Businesses consider the per-unit cost of producing and distributing a good or service when setting the price. Although a low price may help a business gain market share, a product is not profitable if the price is equal to or lower than per-unit cost. **2.5.A.3** Businesses that use *value-based pricing* set a price based on the perceived value or worth of the product to the customer. Businesses that produce highly differentiated or uniquely valuable products are more likely to use value-based pricing. **2.5.A.4** Businesses that use *competitive pricing* set the product's price based on the prices of rival products, often called price matching. If a business believes that its product is sufficiently differentiated, it may charge a premium over what competitors offer. If a business believes its product lacks differentiated features, it may set a price at or below those of competitors to gain market share at the expense of per-unit profit.

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BUSINESS CASE

Students explore how a business uses pricing strategy to achieve a specific business goal.



PROJECT LINK

Finance/Accounting

Task 6: Develop a pricing strategy.

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.5.A Develop and evaluate a pricing strategy.	**2.5.A.5** Businesses that use *cost-based pricing* set the product's price to achieve the desired per-unit profit (price minus per-unit cost) rather than considering factors such as perceived customer value or the price of rival goods. Businesses with clearly defined per-unit costs that can be communicated to customers, such as construction contractors, are more likely to use cost-based pricing. **2.5.A.6** Businesses that use *penetration pricing* set a low price (possibly below per-unit cost) with the intention of increasing the price later in an effort to attract price-sensitive customers away from competitors and grow market share quickly.
2.5.B Evaluate how market conditions affect a business's pricing power.	**2.5.B.1** Businesses that operate in highly competitive markets with little product differentiation have little *pricing power* (the ability to raise prices without risking market share), which may force them to keep prices as low as possible. Businesses that operate in less-competitive markets or sell highly differentiated products have more pricing power and can implement more profitable pricing strategies. **2.5.B.2** Businesses whose customers are highly responsive to price changes have little pricing power because a price increase may reduce revenue if customers buy significantly less of the product. While a price cut may increase product sales, sales may not increase sufficiently to compensate for the lower price, also resulting in lower revenue and profits. **2.5.B.3** Businesses measure customer responsiveness to price changes and how price changes will impact sales and revenue by measuring price elasticity of demand. Businesses that face more elastic (responsive) demand are limited in their ability to raise prices compared to businesses that face more inelastic (less-responsive) demand. **EXCLUSION STATEMENT** Calculating price elasticity of demand is beyond the scope of the AP Business with Personal Finance Exam but can usefully be introduced to prepare students for AP Microeconomics.

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LEARNING OBJECTIVE

2.5.C
Describe legal constraints that limit pricing power.

ESSENTIAL KNOWLEDGE

2.5.C.1
Colluding with competitors to set an agreed-upon price (typically used to set one higher than the competitive market price) is illegal in many countries, including the U.S.

2.5.C.2
Price gouging—the practice of raising the price of a product with increased demand due to a crisis—is illegal in many U.S. states and in many countries.

2.5.C.3
Price discrimination—the practice of charging different prices to different customer segments for the same product—is illegal when done on the basis of race, nationality, sex, or another protected status.

TOPIC 2.6
Place and Channels



BUSINESS CASE

Students explore how a business decides which marketing channels it should use to best reach its target customers.



PROJECT LINK

Operations

Task 7: Select a potential marketing channel or channels.

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.6.A Describe the types of marketing channels available to businesses.	**2.6.A.1** *Place* is used to describe where and how customers access products; for example, whether products are available in retail stores, in company-owned stores, through club memberships, and/or online.
	2.6.A.2 Place is determined by a business's marketing channels (also called distribution channels), which are the final stage of a supply chain. A *marketing channel* consists of all of the individuals and businesses required to deliver a finished product to the final customer.
	2.6.A.3 Businesses that sell consumer products use business-to-consumer (B2C) marketing channels, such as websites and retail stores. Businesses that sell business products use business-to-business (B2B) channels, such as industrial distributors.
	2.6.A.4 Businesses distribute products through either direct channels, which connect them directly to their customers with no intermediaries, or indirect channels, which include intermediaries such as wholesalers and retailers.
	2.6.A.5 Specific distribution channels are legally required for some products, such as prescription medications and products that pose health or safety risks.

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LEARNING OBJECTIVE

2.6.B
Select and evaluate potential marketing channels for a product.

ESSENTIAL KNOWLEDGE

2.6.B.1
Businesses select from a variety of direct and indirect marketing channels by comparing the costs and potential profitability of each channel, the customer experience in each channel, and the ability of each channel to deliver the product to the target customers.

2.6.B.2
Businesses may select direct channels, such as websites or company-owned retail stores because these channels enable a business to maintain more control over pricing and the customer experience. These channels may be more costly to establish and more limited in reach, and the business may need to acquire expertise in sales and distribution.

2.6.B.3
Businesses may select indirect channels when they expect the expertise and networks offered by distribution partners to reduce costs and provide access to more customers. In some cases, these channels are difficult for businesses to access because distributors and retail space may already be dominated by rivals.

TOPIC 2.7

Promotion and Marketing Communications



BUSINESS CASE

Students explore how a business decides which promotional tools to use to effectively communicate with its target customers.



PROJECT LINK

Customer

Task 8: Develop a marketing campaign, including digital marketing tools.

Required Course Content

LEARNING OBJECTIVE

2.7.A

Develop or evaluate a marketing campaign.

ESSENTIAL KNOWLEDGE

2.7.A.1

A *marketing campaign* refers to a coordinated effort to promote a product to potential customers using all or some of the marketing tools in the promotional mix.

2.7.A.2

The promotional mix consists of five tools used to communicate with customers: media advertising, personal selling, sales promotion, direct marketing, and public relations. These tools are used to communicate messages that differentiate products, build brand loyalty, and increase sales and revenue.

2.7.A.3

Businesses strategically use different tools to address how customers make buying decisions for specific products. A customer making a consequential purchase may require detailed, personalized interaction to make a decision, while a customer making a more routine purchase may be satisfied by messages and information conveyed by mass media or direct-marketing materials.

2.7.A.4

Businesses may select media advertising (e.g., TV, radio, newspapers, and billboards) when they want to reach a large number of customers with the same message, such as a commercial or advertisement, at the same time.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
2.7.A Develop or evaluate a marketing campaign.	**2.7.A.5** Businesses may select personal selling when they want to provide detailed product information or a demonstration to a potential customer. Personal selling may include a sales pitch—a short presentation that conveys the product's value proposition—to complete a sale. **2.7.A.6** Businesses may select sales promotions (e.g., discounts and coupons) when they want to encourage more rapid customer decision making or to reduce unsold inventory. **2.7.A.7** Businesses may select direct marketing (e.g., flyers and brochures) when they want to reach many potential customers with a targeted message. **2.7.A.8** Businesses may select public relations (e.g., press releases and media interviews that result in media coverage) when they want to create a favorable public image rather than advance a specific sale.
2.7.B Explain how digital marketing tools have changed business interactions with customers.	**2.7.B.1** Digital marketing is the use of the internet and digital technology tools, such as websites, email, social media, and mobile apps, to connect with and serve customers. In the early 21st century, businesses shifted marketing resources away from traditional advertising such as newspaper, magazine, radio, and TV ads, toward digital tools and platforms. **2.7.B.2** Digital marketing tools enable businesses to reach potential customers, whether global audiences or targeted customer segments, with greater personalization and at lower cost than traditional tools. **2.7.B.3** Digital marketing tools enable businesses to collect a large volume of information—known as *big data*—about how customers respond to marketing communication and which factors make them more likely to buy. Some traditional tools, such as personal selling, permitted this type of data collection on a small scale, but other traditional tools, such as TV ads and billboards, did not.

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AP BUSINESS WITH PERSONAL FINANCE

UNIT 3 – Part 1

Personal Saving and Borrowing



25–35%
AP EXAM WEIGHTING
(Weighting applies to Unit 3 Parts 1 & 2)



~6
CLASS PERIODS

Personal Saving and Borrowing

Developing Understanding

In Unit 3, students shift their attention from how businesses interact with consumers to how both consumers and businesses manage their financial health, including how they generate income, spend and save their earnings, access external funds, and use financial accounting to monitor progress toward their goals.

In Unit 3 – Part 1, students learn how consumers engage with the financial system—first as savers who may set aside some of their current income to meet future goals and prepare for emergencies, then as borrowers who may access loans and credit to help them pay for purchases that exceed their current resources. Students also learn about barriers to saving, potential consequences of debt, and strategies to improve a household's financial stability.

This unit introduces students to key concepts including assets and liabilities, interest rates and terms on loans, risks and returns, and the importance of good credit management. This will help students navigate the world of business accounting and financial management in Unit 3 – Part 2 as well as help prepare them for future financial success.

Building Course Skills

Students develop skills in identifying and describing internal and external factors, such as impulse buying and economic stability, that create challenges and opportunities for individuals and households. They apply personal finance concepts and principles to explain individuals' financial choices. In addition, students practice their financial decision-making skills by evaluating options for growing savings and managing debt and making recommendations to achieve goals. Developing these strengths prepares them for business decision making in Units 3 and 4 and the Financial Advisor Project in Unit 5.

Preparing for the AP Exam

Unit 3 – Part 1 introduces students to both household and individual finances. It then explores strategies for taking advantage of opportunities and overcoming challenges to achieve financial goals, which are key concepts in preparing for the exam. AP Exam questions will ask students to interpret and explain individuals' financial situations and decision making related to a variety of personal finance concepts, including earning income, saving, borrowing, credit, and investing. In addition, the Personal Finance FRQ on the exam will ask students to examine a household's current financial situation and make an informed recommendation to help them achieve their goals.

UNIT AT A GLANCE

Topic	Business Case	Business Canvas Activity	Personal Finance Standards*	6 Class Periods**
3.1 Saving for Future Purchases			Earning Income 12-9 Earning Income 12-10 Spending 12-2 Saving 12-1 Saving 12-2 Saving 12-3 Saving 12-4 Saving 12-5 Saving 12-6 Saving 12-7 Saving 12-9 Investing 12-2	3
3.2 Borrowing, Credit, and Debt			Credit 12-1 Credit 12-2 Credit 12-6 Credit 12-7 Credit 12-8 Credit 12-9 Credit 12-10 Credit 12-11 Credit 12-12 Credit 12-13	3

*The personal finance standards listed refer to the National Standards for Personal Financial Education (2021). See the Appendix (p. 285) for a complete list and accompanying descriptions. Topics in this unit focus entirely on personal finance concepts aligned to the Council for Economic Education/Jump$tart Coalition National Standards for Personal Financial Education; as such, no additional topic margin notes are provided to highlight specific alignment.

**Total class periods are inclusive of course content and the integration of relevant personal finance standards.

TOPIC 3.1

Saving for Future Purchases

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.1.A Describe reasons consumers save, and identify barriers to saving.	**3.1.A.1** Consumers typically earn income by working for an organization such as a business, nonprofit, or government entity and spend income to buy products that address their problems, needs, and wants. Some individuals receive income from other sources, such as self-employment, rental properties, government programs, investments, or retirement accounts. **3.1.A.2** Consumers often save a portion of their income for significant future purchases, such as a car, a home, or college tuition. Individuals also save to prepare for future emergencies, such as job loss or illness, and to have a source of income in retirement. **3.1.A.3** Saving creates a personal asset and may earn interest, which can be a source of current or future income. Interest payments are determined by the interest rate, the amount of savings, the type of savings vehicle, and conditions in the economy. **3.1.A.4** Consumers may be incentivized to save through programs such as automated savings plans (which allocate a set amount of income to savings during each pay period), retirement savings plans (which allow individuals to save on taxes when they save for retirement), and health savings accounts (which allow individuals to save on taxes when they allocate money for health-related expenses).

continued on next page

PERSONAL FINANCE LINK

Earning Income

Earning Income 12-9

Earning Income 12-10

Spending

Spending 12-2

Saving

Saving 12-1

Saving 12-2

Saving 12-3

Saving 12-4

Saving 12-5

Saving 12-6

Saving 12-7

Saving 12-9

Investing

Investing 12-2

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.1.A Describe reasons consumers save, and identify barriers to saving.	**3.1.A.5** Consumers may face barriers that make saving difficult; for example, inconsistent income or recurring expenses that exceed income. Psychological forces such as instant gratification, lifestyle inflation, and impulse buying also make saving difficult.
3.1.B Explain how PESTEL factors can impact the value of savings and incentives to save.	**3.1.B.1** Economic factors influence saving because the overall stability and performance of the economy affects individuals' incomes and the cost of living. Either loss of income in a weak economy or increased cost of living in a strong economy may make saving more difficult because individuals may have less available income after paying necessary expenses. **3.1.B.2** Inflation—an increase in the prices of goods and services—is an economic factor that erodes the purchasing power of savings because money will buy fewer goods and services in the future. The expected loss of purchasing power can disincentivize savings. **3.1.B.3** Political factors influence saving because government tax policies may incentivize savings, for example, by allowing individuals to not pay income taxes on a portion of income that they place in designated accounts for retirement, health care, childcare, or other purposes. **3.1.B.4** Legal factors influence saving because government agencies regulate financial institutions, such as commercial banks and credit unions, to improve consumer protection and the financial stability of these institutions.
3.1.C Develop or evaluate a savings plan.	**3.1.C.1** Consumers decide how much of their income to save based on their personal and financial goals as well as their current income and expenses; individuals are likely to save more if they have defined goals and face fewer barriers.

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LEARNING OBJECTIVE

3.1.C
Develop or evaluate a savings plan.

ESSENTIAL KNOWLEDGE

3.1.C.2
Consumers decide how and where to keep their savings based on how much they are saving, their goals, their available time frame, the impact of PESTEL factors, and their evaluation of the benefits and costs of various savings vehicles offered by financial institutions such as banks and credit unions. These vehicles include savings accounts, money market accounts, and certificates of deposit.

3.1.C.3
Consumers consider interest rates, fees, minimum deposit requirements, and potential risk as well as location, convenience, and reputation when selecting a financial institution and type of account. Individuals choosing a savings vehicle often face tradeoffs, such as higher minimum balances or other requirements for accounts that pay higher interest.

3.1.C.4
A savings account is a deposit account at a financial institution that typically pays interest and is insured by the federal government up to a maximum amount ($250,000 as of 2024), which means the consumer does not lose their deposit if the bank goes out of business. Depositors may pay monthly fees on savings accounts. The minimum deposit required to open an account, the interest rate, and the fees to maintain the account differ by institution.

3.1.C.5
A money market account is similar to a savings account and is also federally insured. Compared to a savings account, a money market account may require a larger minimum deposit, charge higher monthly fees, pay higher interest rates, and provide easier access to cash; these features differ by institution.

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LEARNING OBJECTIVE

3.1.C
Develop or evaluate a savings plan.

ESSENTIAL KNOWLEDGE

3.1.C.6
A certificate of deposit (CD) is similar to a savings account and is also federally insured. A CD typically pays a higher rate of interest than a savings account or money market account, but depositors are restricted from withdrawing their funds for a set period of time—usually one month to five years. A CD typically requires a larger minimum deposit but no monthly fee; these features differ by institution.

3.1.C.7
Some individuals store savings in vehicles such as mobile payment accounts, which make the money easy to spend, or cryptocurrency accounts, which users hope will gain value as an asset. Unless offered by insured financial institutions, these vehicles are not federally insured and typically do not pay interest.

TOPIC 3.2

Borrowing, Credit, and Debt

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.2.A Describe reasons consumers borrow money and the funding sources available to them.	**3.2.A.1** Consumers typically borrow money because they want to spend money on goods or services that exceed their current income and accumulated savings, such as a car, a house, or college tuition. Consumers may also borrow money to address an emergency, to maintain savings while purchasing goods and services, or because of convenience. **3.2.A.2** Borrowing creates a personal liability or debt, and consumers must repay borrowed money (loans) with interest. The interest rate charged and the repayment terms vary based on the lender, the type of loan, the amount of money borrowed, and the borrower's credit history. Loans used to buy items that can serve as collateral, such as cars and houses, are secured loans and typically have lower interest rates than general consumer loans, which are unsecured. **3.2.A.3** Financial institutions such as commercial banks and credit unions make loans to consumers and to businesses, nonprofits, and government entities based on the deposits received from individual savers, businesses, and other entities. **3.2.A.4** Credit card companies, retail stores, mortgage lenders, and alternative financial services, such as payday loans, check-cashing services, and instant tax refunds, also lend money to consumers.

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PERSONAL FINANCE LINK

Credit

Credit 12-1
Credit 12-2
Credit 12-6
Credit 12-7
Credit 12-8
Credit 12-9
Credit 12-10
Credit 12-11
Credit 12-12
Credit 12-13

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.2.A Describe reasons consumers borrow money and the funding sources available to them.	3.2.A.5 Consumer protection laws require lenders to communicate credit terms clearly and explicitly to borrowers; these laws also govern debt collection tactics and prohibit discriminatory lending practices.
3.2.B Explain how a lender evaluates the creditworthiness of a potential borrower.	3.2.B.1 Lenders face the risk that a borrower will default—meaning that the borrower will not repay the loan—so they typically prefer lending to individuals who pose less risk, for example, consumers with low existing debt, high income and savings, and a history of repaying loans on time. Lenders willing to make loans to higher-risk individuals, including alternative financial services, typically charge higher interest rates. 3.2.B.2 Lenders collect information about a potential borrower's income, savings, and existing debt as well as credit reports detailing their past use of credit to determine the consumer's creditworthiness. 3.2.B.3 Credit reports are created by credit bureaus (also called credit reporting agencies), which collect information each time a consumer interacts with a financial institution; for example, opening a savings account, securing a bank loan, applying for a credit card, or making a payment. 3.2.B.4 A credit report includes a credit score reflecting the consumer's past use of credit. These reports can be shared with potential lenders, potential employers, potential landlords, insurance companies, and government agencies.
3.2.C Recommend a strategy to manage a consumer's existing debt and/ or use of credit.	3.2.C.1 High levels of debt can harm a consumer's financial condition because payments on loans reduce the amount of income available to save or use for other expenses. Larger debts and/ or higher interest rates require higher monthly payments.

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LEARNING OBJECTIVE

3.2.C

Recommend a strategy to manage a consumer's existing debt and/ or use of credit.

ESSENTIAL KNOWLEDGE

3.2.C.2

Borrowers may face difficulty repaying loans for a variety of reasons, including loss of income or monthly payments that exceed the consumer's ability to pay.

3.2.C.3

Borrowers can manage the impact of debt on their finances by maintaining a high credit score, seeking better terms on loans, and repaying high-interest-rate loans (e.g., credit card debt) as quickly as possible.

3.2.C.4

Strategies to improve an individual's credit score include paying bills on time, paying off existing debt, and minimizing use of credit cards.

3.2.C.5

Borrowers can obtain better terms on loans, including lower interest rates and lower fees, by comparing the terms offered by different lenders and by making down payments on major purchases like a home or car. A down payment requires using some income or saved money to pay part of the cost of the purchase.

3.2.C.6

Individuals who face negative consequences from unmanageable debt, such as property seizures, may be able to seek debt management assistance. In some cases, borrowers may seek bankruptcy—a legal process that eliminates some debts and helps the borrower set up a repayment plan for other debts.

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AP BUSINESS WITH PERSONAL FINANCE

UNIT 3 – Part 2

Business Finance and Accounting



25–35%
AP EXAM WEIGHTING
(Weighting applies to Unit 3 Parts 1 & 2)



~29
CLASS PERIODS

Businesses Finance and Accounting

Developing Understanding

Effective financial management is essential to business viability. Without sufficient revenue to cover expenses and generate income, even a great business idea can fail. Nearly every aspect of business—from product launch and daily operations to innovation and growth—requires funding. Therefore, the ability to acquire, allocate, and track money is a critical business skill.

Building upon the foundational knowledge of the financial system from Unit 3 – Part 1, this unit introduces students to key financial aspects of launching and operating a business. Students learn how a business determines its startup and recurring costs and how it can obtain capital to launch the business. Students consider the potential benefits and risks that lenders and investors face when providing financial capital to businesses, and explain why individuals may choose to purchase financial assets like stocks and bonds. Students also consider how both businesses and individuals use insurance to reduce some types of risk. Unit 3 – Part 2 introduces students to the three key financial statements used in business—income statements, balance sheets, and cash flow statements—as well as to household financial statements such as budgets and statements of net worth.

Building Course Skills: Business Cases

In Unit 3 – Part 2, the provided business cases introduce students to both fictional and real-world businesses facing critical financial challenges, such as how to obtain startup funding, how to address rising resource costs, and how to manage cash flow. Through the study of the provided cases, students develop their skills in interpreting and presenting financial data. Students also begin examining business decision making from a financial perspective.

Each case provided by the AP Program includes a recommended opening activity, reading questions, and discussion prompts to help students apply new knowledge. For more guidance on using cases effectively in the classroom, see the **Guide to Teaching with Cases**.

Building Course Skills: Business Canvas Project

Students apply their understanding of business finance and accounting to develop their Business Canvas Project in Unit 3 – Part 2. Students develop a list of projected startup costs and initial expenses, determine potential sources of startup funding, and create a projected or real income statement. During this unit, students also learn to communicate the viability of their business idea to potential investors through accurate financial statements and a pitch that conveys the value proposition of their product.

Preparing for the AP Exam

Unit 3 – Part 2 introduces students to financial data and statements, which are key concepts in preparing for the exam. AP Exam questions will ask students to describe and interpret financial data, determine financial values using calculations, and evaluate business performance using financial statements and profitability measures. The Business Decision FRQ on the exam will ask students to apply financial criteria as a part of developing a strategy recommendation.

UNIT AT A GLANCE

Topic	Business Case	Business Canvas Activity	Personal Finance Standards*	29 Class Periods** (~5-6 days for the Business Canvas Project)
3.3 Accounting and Financial Management			Spending 12-1 Spending 12-9 Investing 12-14	2
3.4 Business Expenses	DK Coffee Lab, Part 1	Task 1: Determine startup costs and initial expenses associated with launching a new business/product.	Managing Risk 12-1 Managing Risk 12-2 Managing Risk 12-3	4
3.5 Financial Capital	DK Coffee Lab, Part 2	Tasks 2 and 3: Determine potential source(s) of financial capital and develop a pitch to prospective lenders or investors.	Earning Income 12-8 Investing 12-1 Investing 12-2 Investing 12-3 Investing 12-5	4
3.6 The Income Statement	Hershey	Task 4: Develop an actual or projected income statement for a business, including a revenue projection.	Spending 12-1 Spending 12-7 Spending 12-9	5
3.7 The Balance Sheet and Net Worth	DCH DK Coffee Lab, Part 3			5
3.8 The Cash Flow Statement	AANE			3
3.9 Ethics and Financial Reporting	Yardley		Investing 12-12	3
Unit 3 Formative Assessment				3

*The personal finance standards listed refer to the National Standards for Personal Financial Education (2021). See the Appendix (p. 285) for a complete list and accompanying descriptions.

**Total class periods are inclusive of course content, Business Canvas Project activities, and the integration of relevant personal finance standards.

TOPIC 3.3

Accounting and Financial Management

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.3.A Explain why businesses and consumers track and evaluate financial data.	**3.3.A.1** Businesses engage in a variety of financial transactions such as buying resources, receiving payment from customers, distributing profits to owners, and saving and borrowing funds. These transactions affect the business's assets, liabilities, and *owners' equity*, which is the value of the business to its owners.
	3.3.A.2 Consumers engage in a variety of financial transactions, such as receiving income, buying goods and services, saving, and borrowing, that affect their assets, liabilities, and net worth.
	3.3.A.3 Businesses record all financial transactions and use this data to prepare reports and financial statements that summarize the business's financial performance. Financial statements are used to monitor the business's financial health, guide decision making, provide accurate information to shareholders, investors, and lenders, and ensure compliance with laws and reporting regulations.
	3.3.A.4 Generally accepted accounting principles (GAAP) require corporations that sell ownership shares to the public to consistently disclose all positive and negative financial information for each reporting period, typically quarterly (every three months) or annually.

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PERSONAL FINANCE LINK

Spending

Students examine how using an organized system, such as a budget, to track personal financial transactions can help consumers monitor their finances and make decisions aligned to their financial goals.

Spending 12-1

Spending 12-9

Investing

Students examine the role of financial advisors and accountants in helping individuals with financial planning, decision making, and tax preparation.

Investing 12-14

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.3.A Explain why businesses and consumers track and evaluate financial data.	3.3.A.5 Consumers are not usually required to record or report financial transactions; however, having an organized system, such as a budget, for tracking financial transactions helps consumers monitor their finances and make decisions aligned to their financial goals.
3.3.B Describe the roles of accounting and finance departments in the preparation, reporting, and use of financial information.	3.3.B.1 Accounting departments identify and record all financial transactions during a time period and prepare financial statements.
	3.3.B.2 Managerial accountants provide financial information and analysis to managers and other internal stakeholders for the purpose of business planning and decision making.
	3.3.B.3 Financial accountants provide financial information and analysis primarily to external stakeholders—specifically shareholders, investors, and lenders.
	3.3.B.4 Finance departments are responsible for analyzing the financial data compiled by accounting departments and recommending strategies for maintaining or improving a business's financial performance.
	3.3.B.5 Consumers may hire financial advisors and/or accountants to help with financial planning and decision making as well as tax preparation.

TOPIC 3.4
Business Expenses

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.4.A Determine startup costs associated with launching a new business or product.	**3.4.A.1** Startup costs are the one-time expenditures associated with launching a new business or product as well as initial expenses incurred while establishing the business.
	3.4.A.2 One-time expenditures include legal fees, incorporation and licensing fees, and in some cases equipment purchases.
	3.4.A.3 A business's initial expenses include occupancy expense, research and development, marketing, insurance, and the costs associated with production or acquisition of initial inventories. All of these expenses become ongoing once the business begins operation.
3.4.B Describe expenses associated with operating a business.	**3.4.B.1** Businesses classify their recurring costs as either direct or indirect. Direct costs are tied to the production or delivery of specific goods or services. Indirect costs, also called *operating expenses*, are the costs associated with running the business.
	3.4.B.2 Recurring costs can also be fixed or variable. *Fixed expenses* do not change with production or service levels, while *variable expenses* will increase as production/service levels increase.

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BUSINESS CASE

Students explore how a fictional entrepreneur determines the startup costs and initial expenses associated with launching a business.



PROJECT LINK

Finance/Accounting

Task 1: Determine startup costs and initial expenses associated with launching a new business/product.



PERSONAL FINANCE LINK

Managing Risk

Students examine the purpose of insurance for individuals and how risk tolerance may impact individuals' decisions about how much insurance they require.

Managing Risk 12-1

Managing Risk 12-2

Managing Risk 12-3

LEARNING OBJECTIVE

3.4.B
Describe expenses associated with operating a business.

ESSENTIAL KNOWLEDGE

3.4.B.3
Businesses that produce goods incur direct costs called the *cost of goods sold (COGS)*. COGS typically includes the cost of raw materials, production supplies, production-related wages and benefits, and the cost to operate manufacturing facilities. The components of COGS can be either fixed or variable; rent for a factory is fixed, while raw materials costs are variable.

3.4.B.4
For businesses that provide services, the direct costs are called *cost of sales* and include direct labor expenses, travel costs, and any materials associated with delivering the service.

3.4.B.5
Businesses face recurring indirect costs, called *operating expenses*. These costs, which are typically fixed, include occupancy expenses, salaries and benefits for office and sales staff, marketing and advertising costs, supplies, utilities, maintenance, and insurance.

3.4.B.6
Businesses (and consumers) buy insurance to protect against financial losses from accidents, injuries, or property damage. Some types of insurance are required—for example, workers compensation insurance—but many are optional. Businesses (and consumers) vary in their willingness to accept risk and/or pay for insurance to minimize risk.

TOPIC 3.5
Financial Capital

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.5.A Explain why businesses seek external financial capital.	**3.5.A.1** Many entrepreneurs initially rely on bootstrapping (i.e., using personal savings), personal bank loans, and/or personal credit to fund startup costs. **3.5.A.2** Entrepreneurs evaluate their need for external *financial capital* (cash) by comparing their personal funds to their business's initial needs and by calculating how many goods or services they would need to sell in a period to break even (cover all costs for the period). **3.5.A.3** Entrepreneurs seek external financial capital if they lack the funds required to pay startup costs and operating costs for a sufficient period of time to break even. **3.5.A.4** Established businesses seek external financial capital for a variety of reasons, including financing new product development, replacing fixed assets, and increasing sales volume and revenue. **3.5.A.5** New and established businesses often seek external financial capital to manage cash flow because revenue collection can be irregular, while expenses must nonetheless always be paid.

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BUSINESS CASE

Students explore how a fictional entrepreneur evaluates potential funding sources and secures external financial capital.



PROJECT LINK

Finance/Accounting

Tasks 2 and 3: Determine potential source(s) of financial capital and develop a pitch to prospective lenders or investors.



PERSONAL FINANCE LINK

Earning Income

Students examine how investors can generate income, including interest, dividends, and capital gains, from financial investments, such as bonds and stocks.

Earning Income 12-8

Investing

Students examine the potential risks and returns of financial investments, explore the factors that may cause prices of financial assets to fluctuate, and consider how risk tolerance impacts personal investing decisions.

Investing 12-1

Investing 12-2

Investing 12-3

Investing 12-5

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.5.B Determine potential sources of financial capital for a business.	**3.5.B.1** Most sources of financial capital are classified as loans or equity financing. **3.5.B.1.i** *Business loans* are similar to personal loans and must be repaid with interest. Interest on loans is a business expense, and higher interest rates and/or larger loans increase the cost of borrowing for businesses. **3.5.B.1.ii** *Equity financing* is a type of business funding that requires issuing ownership shares and ceding some control over decisions and a portion of future profits to investors, who become part owners. **3.5.B.2** New businesses, typically those in operation for less than two years, often borrow money from the owners' friends and family or use equity financing by issuing (selling) ownership shares to others, including friends and family or outside investors. **3.5.B.3** Established businesses, typically those in operation for at least two years with proven revenue and capacity to repay, can obtain funds through business bank loans. **3.5.B.4** Businesses organized as corporations can obtain funds by issuing bonds or shares of stock. A bond represents a loan from an investor to a business. Stock is an ownership share in the business and can be sold privately or publicly.
3.5.C Describe potential benefits and risks to lenders and investors who provide financial capital to businesses.	**3.5.C.1** In exchange for the financial capital they provide to businesses, lenders and investors obtain financial assets—loans (including bonds) or shares of stock. These assets can be resold in a secondary market. **3.5.C.2** Lenders receive income from interest payments on loans. A bond pays interest to the bond holder. When an individual consumer buys a corporate bond in the secondary market, they become a lender to the business.

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LEARNING OBJECTIVE

3.5.C

Describe potential benefits and risks to lenders and investors who provide financial capital to businesses.

ESSENTIAL KNOWLEDGE

3.5.C.3

Investors may receive income from *dividends*, which represent their share of a business's profits; however, some corporations reinvest earnings into the business and do not pay dividends. When an individual consumer buys a share of stock in the secondary market, they become an investor (shareholder) in the business.

3.5.C.4

If an investor sells an asset at a higher price than they paid for it, they achieve a *capital gain*. The prices of financial assets such as bonds and stocks change in response to business performance, investor demand, and PESTEL forces.

3.5.C.5

The annual *rate of return* on an investment is determined by dividing the total dollars gained (the sum of income and any capital gain) by the price of the asset.

3.5.C.6

Lenders and investors risk financial loss if a business performs poorly. Lenders risk losses if the business is unable to make interest payments or repay loans. Investors risk lost income (dividends) and decreased stock value if the business's profits decline, and they may lose their entire financial stake if a business shuts down.

3.5.C.7

Lenders and investors vary in their *risk tolerance*, which is their willingness to take financial risks. Some consumers and institutional lenders and investors have a high risk tolerance and will provide financial capital to fund risky or unproven ideas, while others are more cautious. Lenders and investors expect a higher rate of return when they invest in riskier assets.

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LEARNING OBJECTIVE

3.5.D
Develop and evaluate a pitch to prospective lenders or investors.

ESSENTIAL KNOWLEDGE

3.5.D.1
Lenders and investors often require businesses to provide a business plan that includes their value proposition, market research, marketing strategy, and financial projections to justify a specific funding request, rate of return, and level of risk. A business owner typically develops a polished pitch summarizing this key information to persuade potential lenders and investors to provide their business with capital.

3.5.D.2
When evaluating a funding request from an established business, lenders and investors rely on the business's financial reports and projections as well as external industry data to estimate the economic valuation of the business. A valuation provides prospective investors with an estimate of what an ownership share is worth and helps lenders assess the business's capacity to repay a loan.

3.5.D.3
A funding request is more likely to be successful when the business provides evidence of product-market fit and a basis for its financial projections. Lenders and investors typically prefer funding projects with lower risk and higher projected returns.

3.5.D.4
In evaluating a request for financial capital, lenders and investors may also consider the qualifications of the business's leadership team and whether the business's value proposition and mission align with the funders' goals.

TOPIC 3.6
The Income Statement

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.6.A Determine and describe components of a business income statement.	**3.6.A.1** An *income statement*, also referred to as a *statement of profit and loss*, is a financial statement that compares a business's total revenue to its total costs over a time period to determine the business's net profit or loss. An income statement typically provides multiple periods (e.g., years, quarters, or months) of data for comparison purposes. **3.6.A.2** An income statement organizes income and cost information into three major categories: revenue, cost of goods sold (COGS), and operating expenses. Income statements also identify interest, taxes, and nonrecurring expenses. **3.6.A.3** For income statement purposes, *revenue* is the income generated by a business's core activities, such as sales of goods and services. **3.6.A.4** *Gross profit* describes the profit earned after deducting only the direct costs of production; it is calculated by subtracting COGS from revenue. **3.6.A.5** Operating expenses are the indirect costs a business incurs and are typically organized as selling expenses (e.g., advertising costs and salespeople's salaries) and general and administrative expenses (e.g., office salaries, rent on office space, and insurance). Research and development spending is also included in operating expenses.

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BUSINESS CASE
Students explore how a business uses the revenue and cost information on an income statement to identify and respond to financial challenges.

PROJECT LINK
Finance/Accounting
Task 4: Develop an actual or projected income statement for a business, including a revenue projection.

PERSONAL FINANCE LINK
Spending
Students examine how budgeting helps consumers manage their income and expenses and assess whether they are meeting their financial goals, including managing debt, saving for future expenses, and donating to charitable organizations.
Spending 12-1
Spending 12-7
Spending 12-9

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.6.A Determine and describe components of a business income statement.	**3.6.A.6** *Operating profit* is the profit earned after deducting COGS and operating expenses and represents the business's net income before interest and taxes; it is calculated by subtracting operating expenses from gross profit. **3.6.A.7** *Interest expense* is the cost of borrowing money through loans (including bonds). *Pretax income* is calculated by subtracting interest expense from operating profit. **3.6.A.8** If pretax income is positive, businesses must pay taxes on that income; any tax expense is included on the income statement. **3.6.A.9** *Net profit*, or income after taxes, is the final dollar amount reported on a typical income statement. It is calculated by subtracting taxes from pretax income. Net profit is known as the bottom line and represents the profit or income earned by the business's owners at the end of a given period. **EXCLUSION STATEMENT** Adjustments to gross sales for the purpose of calculating net sales, the composition of cost of goods sold, nonoperational sources of income and expenses (except interest), and below-the-bottom-line income statement items are beyond the scope of the AP Business with Personal Finance Exam.
3.6.B Evaluate the financial performance of a business using income statement information.	**3.6.B.1** Income statement information is used by internal and external stakeholders to monitor trends in revenues and costs, evaluate profitability, and inform decisions related to improving future profitability. **3.6.B.2** *Gross profit margin*, which is calculated as gross profit divided by total revenue, is used to evaluate how successfully a business is setting prices and managing its direct costs.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.6.B Evaluate the financial performance of a business using income statement information.	**3.6.B.3** *Operating profit margin*, which is calculated as operating profit divided by total revenue, is used to evaluate how successfully a business is marketing and selling its product(s), administering the activities of the business, and controlling operating expenses. **3.6.B.4** *Net profit margin*, which is calculated as net profit divided by total revenue, is used to evaluate overall profitability. Net profit margin describes the percentage of revenue that flows to owners as income. **3.6.B.5** Gross profit margin, operating profit margin, and net profit margin are typically benchmarked against projections, past performance, and performance by competitors as a means of determining whether the business's financial performance is meeting expectations. **3.6.B.6** Businesses use the percentage change equation to determine the rate of change for any data point. For example, a business evaluating financial performance may calculate the rate of change in its income, cost, profit, or profit margin. Percent change = [(Current Value – Initial Value) / Initial Value] x 100.
3.6.C Explain why and how businesses and consumers predict and plan for future income and expenses.	**3.6.C.1** Businesses and consumers face financial uncertainty because incomes and expenses fluctuate in response to changing needs and wants, competitive pressure within markets, and PESTEL forces. Thoughtful planning can help both businesses and consumers meet financial goals. **3.6.C.2** Businesses develop projected income statements and/or budgets to plan for revenues, costs, and resulting profit/loss for a period (e.g., a month, a quarter, or a year). Projected income statements and budgets describe estimates of all expenses involved in running the business and predicted revenues, given projected production and sales levels.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.6.C Explain why and how businesses and consumers predict and plan for future income and expenses.	**3.6.C.3** Projected income statements and budgets help businesses plan for expected costs, identify funding needs, and maintain enough cash to meet current obligations. **3.6.C.4** Consumers use budgets to plan saving and spending allocations based on expected income. A consumer budget describes expected net pay (income after taxes and other deductions) for a period, typically a month or a year, and all planned savings and expenses including debt payments. **3.6.C.5** Budgets help consumers identify spending patterns and assess whether they are meeting their financial goals, including managing debt, saving for future expenses, and donating to charitable organizations whose missions they support.
3.6.D Develop an income statement or projected income statement for a business.	**3.6.D.1** Businesses use current financial data tracking revenues, expenses, and taxes to develop income statements. **3.6.D.2** Businesses predict future revenues and expenses (and estimated taxes) to develop projected income statements. **3.6.D.3** Future revenues are estimated based on planned pricing strategies and market research about customer demand and industry trends. **3.6.D.4** Future COGS and operating expenses are estimated based on planned production processes, the cost of supply chain components, and other projected expenses, such as occupancy expenses, marketing expenses, office and sales salaries, and planned research and development.

TOPIC 3.7

The Balance Sheet and Net Worth

Required Course Content

LEARNING OBJECTIVE

3.7.A
Determine and describe components of a business balance sheet.

ESSENTIAL KNOWLEDGE

3.7.A.1
A *balance sheet* is a financial statement that compares a business's assets to its liabilities and owners' equity—the net worth of the business to its owners at a specific point in time. According to the *balance sheet equation* (also called the *fundamental accounting equation*), assets equal liabilities plus owners' equity.

3.7.A.2
The assets listed on a balance sheet include every item of value owned by a business, grouped according to liquidity into current assets, long-term assets, and intangible assets.

3.7.A.2.i
Liquidity refers to the ease with which an asset can be converted into cash.

3.7.A.2.ii
Current assets, including cash, short-term investments, accounts receivable (money owed to a business by customers), and inventory, are considered highly liquid and are used to fund the day-to-day operations of businesses.

3.7.A.2.iii
Long-term assets, including fixed assets and long-term investments, are considered less liquid. Fixed assets such as production plants are used to run business operations.

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BUSINESS CASE
Students explore how a fictional business uses a balance sheet to determine the business's value and assess its ability to fund day-to-day operations.



PERSONAL FINANCE LINK
Students examine how investors and lenders interpret balance sheets to evaluate the financial condition of a business. Students also examine the concept of personal net worth by considering how potential lenders may use information about a household's net worth as part of the loan application process and how net worth factors into retirement planning.

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.7.A Determine and describe components of a business balance sheet.	3.7.A.2.iv Intangible assets, such as patents, brand names, and trademarks, are not physical items but have value because they represent potential revenue. 3.7.A.3 The liabilities listed on a balance sheet represent debts or obligations owed by a business, grouped into current and long-term liabilities, in order of when payment is due. 3.7.A.3.i Current liabilities include accounts payable (money owed to a business's suppliers), short-term debt, current payments on long-term debt, and accrued (unpaid) operating expenses. These liabilities must be paid within one year. 3.7.A.3.ii Long-term liabilities, such as mortgages, bank loans, and long-term bonds, represent obligations to pay beyond one year. 3.7.A.4 Owners' equity—the net worth of a business—is the difference between assets and liabilities. Owners' equity is often comprised of stock and retained earnings, which are the business's cumulative profits not paid out as dividends. 3.7.A.5 A balance sheet typically provides a snapshot of comparable data (e.g., the end of a quarter) from a previous year or multiple years for purposes of comparison.
3.7.B Interpret the information in a business's balance sheet.	3.7.B.1 Internal stakeholders, such as business managers and owners, as well as external stakeholders, such as lenders and investors, use balance sheets to evaluate the financial condition of a business at a point in time (e.g., the end of a year or quarter). 3.7.B.2 A balance sheet indicates whether a business has a positive net worth, whether it has sufficient *working capital* to fund day-to-day operations (current assets meet or exceed current liabilities), and whether its debt level is comparable to similar businesses.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.7.B Interpret the information in a business's balance sheet.	**3.7.B.3** Business owners may shut down a business or pursue bankruptcy if the business cannot access sufficient current assets to fund operations. Bankruptcy is a legal process through which a business can liquidate assets, eliminate or repay debts, and either shut down or reorganize the business under legal supervision.
3.7.C Describe the purpose of determining personal net worth.	**3.7.C.1** Personal net worth is typically calculated for a household, which may include more than one individual. Net worth is determined by adding all of the household's assets, including savings and investments, property, and personal possessions, and subtracting all liabilities. **3.7.C.2** Lenders may require information about a consumer's household net worth as part of the loan application process. **3.7.C.3** Consumers and financial planners consider net worth when determining whether individuals have sufficient savings to retire.

TOPIC 3.8

The Cash Flow Statement



BUSINESS CASE

Students explore how a nonprofit identifies and addresses an annual operating deficit and an ongoing cash flow challenge.

Required Course Content

LEARNING OBJECTIVE

3.8.A

Determine and describe components of a business's cash flow statement.

ESSENTIAL KNOWLEDGE

3.8.A.1

A *cash flow statement* is a financial statement used by businesses to show how cash inflows and outflows impact a business's cash balance over the course of a financial reporting period.

3.8.A.2

Businesses closely monitor cash balances to ensure there is sufficient cash available to pay recurring expenses (e.g., payroll and rent), repay lenders, and manage unforeseen expenses.

3.8.A.3

Cash inflows increase a business's cash balance and typically include payments from customers, interest or dividends earned on investment assets, proceeds received from the sales of a business's assets, and/or infusions of financial capital, such as money raised by taking out a new loan.

3.8.A.4

Cash outflows decrease a business's cash balance and typically include payments to employees and suppliers, interest expense paid on existing loans, taxes paid to the government, money spent to purchase assets, money spent on debt repayment, and dividends.

3.8.A.5

A business's cash flow may be positive or negative at the end of a period.

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LEARNING OBJECTIVE

3.8.B
Explain how a business's stakeholders use cash flow statement information.

ESSENTIAL KNOWLEDGE

3.8.B.1
The cash flow statement is used to assess a business's ability to meet its financial obligations, including its ability to pay its employees, suppliers, creditors, and shareholders.

3.8.B.2
Negative cash flow may signal that a business is unable to pay its current expenses, which could lead to shut down or bankruptcy even if net income is positive. In such a situation, the business may need to raise more funds, collect accounts receivable faster, or obtain better terms from suppliers and lenders to continue operating.

TOPIC 3.9
Ethics and Financial Reporting



BUSINESS CASE

Students examine how and why an employee at a fictional business is tempted to behave unethically for personal gain.



PERSONAL FINANCE LINK

Investing

Students examine how regulation of financial markets is designed to ensure that investors have access to accurate information and are protected from fraud.

Investing 12-12

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
3.9.A Explain why an individual or a business might be incentivized to engage in unethical financial management and reporting practices.	**3.9.A.1** Unethical practices in finance include misuse of funds, tax evasion, embezzlement, bribery, lack of transparency, and fraud, which can include falsifying information on financial statements.
	3.9.A.2 Access to large sums of a business's cash creates a situation where individuals may seek to embezzle, misuse funds, or falsify information for personal gain.
	3.9.A.3 A business or its financial managers may be able to influence stock prices, secure better terms on loans, or avoid taxes by portraying its financial situation to stakeholders and to the government as better or worse than it really is.
3.9.B Explain how laws and professional codes of conduct encourage ethical behavior by accounting and financial managers.	**3.9.B.1** Misusing funds, tax evasion, embezzlement, bribery, and fraud are illegal in most countries, but laws and punishments vary from country to country.
	3.9.B.2 Under U.S. law, publicly held corporations are required to submit financial records annually for auditing by independent accounting firms. Financial market regulations are designed to ensure that investors have access to accurate information and are protected from fraud.

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LEARNING OBJECTIVE

3.9.B

Explain how laws and professional codes of conduct encourage ethical behavior by accounting and financial managers.

ESSENTIAL KNOWLEDGE

3.9.B.3

Professional organizations for accountants and financial managers maintain professional ethics codes for their members. Such codes emphasize honesty, integrity, transparency, objectivity, and confidentiality.

3.9.B.4

Many businesses develop internal mechanisms, such as codes of conduct, audit requirements, and cash-handling processes, to prevent unethical behavior.

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AP BUSINESS WITH PERSONAL FINANCE

UNIT 4

Management and Strategy



15–20%
AP EXAM WEIGHTING



~30
CLASS PERIODS

UNIT 4

15–20% AP EXAM WEIGHTING | ~30 CLASS PERIODS

Management and Strategy

Developing Understanding

Launching a new business and achieving market viability are significant accomplishments for an entrepreneur, but even then the work is far from done. Once a business is established, leaders must transition from building the business to effectively managing it. This shift requires strong leadership, teamwork, and the ability to identify and solve problems. Unit 4 introduces students to core concepts of management and strategy and the tools business leaders use to evaluate organizational progress, identify targets for improvement, and achieve their goals.

This unit examines the tools businesses use to track performance, such as key performance indicators (KPIs), and to assess their external environment and internal capacities, such as Porter's Five Forces and SWOT analysis. Unit 4 also highlights the importance of recruiting and retaining skilled employees. Students learn about the types of work arrangements, compensation schemes, and incentives they may encounter in a future workplace.

Building Course Skills: Business Cases

The provided business cases in Unit 4 introduce students to new and established businesses that track financial performance, market share, and other KPIs to guide strategic decisions. Explaining opportunities and problems facing businesses, identifying and evaluating courses of action, and making evidence-based recommendations are some of the ways that the cases help students refine their decision-making skills.

Each case provided by the AP Program includes a recommended opening activity, reading questions, and discussion prompts to help students apply new knowledge. For more guidance on using cases effectively in the classroom, see the **Guide to Teaching with Cases**.

Building Course Skills: Business Canvas Project

In Unit 4, students apply entrepreneurial thinking, decision making, and communication skills to finalize their Business Canvas Project. They apply business tools to assess the desirability, viability, and feasibility of their product idea. Students set KPIs for their business and use strategic frameworks to evaluate and improve their business's competitiveness in the market. Finally, students use communication skills to create their final canvas, pitch, data visualization, and income statement.

Preparing for the AP Exam

Unit 4 engages students in a structured decision-making process using the PACED (problem, alternatives, criteria, evaluation, decision) model. This process prepares students to identify and use relevant criteria to evaluate potential courses of action, which is the focus of the Business Decision FRQ. Additionally, the Business Canvas Project Exam-Day Validation FRQ will ask students to respond to questions about their project and the desirability, viability, and feasibility of their business idea.

UNIT AT A GLANCE

Topic	Business Case	Business Canvas Activity	Personal Finance Standards*	30 Class Periods ** (~15-16 days for the Business Canvas Project)
4.1 Management and Leadership	Assort Health Canva	Task 1: Identify skills and core competencies.	Earning Income 12-1 Earning Income 12-2 Earning Income 12-3 Earning Income 12-4 Managing Risk 12-5 Managing Risk 12-6	4
4.2 Evaluating Performance Using KPIs	BREAUX Capital	Task 2: Identify KPIs and benchmarks related to customer-related goals, market-related goals, operations-related goals, and finance-related goals.		3
4.3 Strategy and Decision Making	ExpressionMed	Task 3: Make a strategic decision to address a problem or opportunity using the PACED model.		4
4.4 Strategic Frameworks: Porter's Five Forces and SWOT Analysis	Crepes & Waffles Square Meal Feeds	Task 4: Use strategic frameworks—Porter's Five Forces and SWOT analysis—to evaluate the competitive landscape and the business's internal capabilities.		6
Unit 4 Formative Assessment				3
Business Canvas Project		Task 5: Prepare the final business canvas and appendix.		10

*The personal finance standards listed refer to the National Standards for Personal Financial Education (2021). See the Appendix (p. 285) for a complete list and accompanying descriptions.

**Total class periods are inclusive of course content, Business Canvas Project activities, and the integration of relevant personal finance standards.

TOPIC 4.1

Management and Leadership

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
4.1.A Describe the function of management.	**4.1.A.1** *Management* is the process of planning, organizing, leading, and evaluating a business's employment of human, financial, and physical resources to meet the business's goals and objectives.
	4.1.A.2 Management includes the decisions, actions, and leadership of managers at all levels of a business, from executive leaders to supervisors.
	4.1.A.3 Managers who lead specialized departments in a business are responsible for coordinating the activities of employees to ensure that their work is aligned to the business's vision and mission.
4.1.B Identify and demonstrate effective leadership and business communication skills.	**4.1.B.1** Leadership and communication skills are valued in business because leaders and managers need to collaborate and communicate effectively with a wide variety of stakeholders, including supervisors, colleagues, employees, lenders, investors, customers, and the public.
	4.1.B.2 Key leadership skills include the ability to articulate the business's vision and mission, build productive teams, negotiate conflicts, and motivate people. Motivated employees are more productive, more likely to stay, and more likely to build strong positive relationships with customers, coworkers, and teams, all of which contribute to business performance.

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BUSINESS CASE

Students explore how a business recruits and hires employees with the essential core competencies, experiences, and backgrounds needed to produce and deliver its products to customers.



PROJECT LINK

Organization

Task 1: Identify skills and core competencies.



PERSONAL FINANCE LINK

Earning Income

Students examine why businesses require skilled employees with a variety of core competencies and how employees are recruited, compensated, and trained. Students also examine employee benefits, such as training and educational reimbursement programs, as well as intangible benefits used to motivate and retain employees, such as autonomy, flexibility, and recognition.

Earning Income 12-1
Earning Income 12-2
Earning Income 12-3
Earning Income 12-4

Managing Risk

Students examine employee benefits, such as contributions to health insurance, health savings plans, and disability insurance.

Managing Risk 12-5
Managing Risk 12-6

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
4.1.B Identify and demonstrate effective leadership and business communication skills.	4.1.B.3 Key communication skills for leaders, managers, and employees include expressing ideas clearly, communicating persuasively, listening empathetically, and correctly interpreting and responding to feedback.
4.1.C Explain why businesses need to hire and develop employees with a variety of core competencies.	4.1.C.1 Business leaders and managers hire employees to do the day-to-day work of a business; for example, producing and providing products, marketing to customers, making sales, and managing finances.
	4.1.C.2 Businesses need employees with a variety of core competencies, experiences, and backgrounds because of the different types of tasks to be done, although some tasks may be outsourced, especially if they are outside the business's core competencies and/or operating activities.
	4.1.C.3 Hiring and/or developing skilled employees is essential to business viability because employees who lack skills or adequate training may create flawed products or provide poor service, which can cause the business to lose customers, brand reputation, and revenue. Some skills or attributes may be rare or require extensive training.
	4.1.C.4 Employee training may include postsecondary education, apprentice programs, on-the-job training, online training, and continuing education.
4.1.D Explain how businesses compensate, motivate, and seek to retain high-quality employees.	4.1.D.1 Businesses hire some employees to work full time, while others are hired as part-time, temporary, or contract employees.
	4.1.D.2 Employees may be paid using a variety of compensation schemes such as hourly wage, annual salary, commission, piece rate pay, or profit sharing. The type of compensation depends on the industry, the employee role, legal guidelines (e.g., minimum wage), and the degree to which businesses must outbid rivals to secure high-quality employees.

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LEARNING OBJECTIVE

4.1.D

Explain how businesses compensate, motivate, and seek to retain high-quality employees.

ESSENTIAL KNOWLEDGE

4.1.D.3

Employers generally determine compensation by evaluating factors like education, skills, and productivity.

4.1.D.4

Employee compensation may include benefits such as contributions to health insurance, retirement savings plans, health savings plans, disability insurance, educational reimbursement programs, and paid time off.

4.1.D.5

Many businesses use incentives, like raises, promotions, or bonuses, to motivate and retain employees because it is typically more cost-effective to keep high-quality employees than to recruit and train new ones. Businesses may also seek to motivate and retain employees by providing them autonomy, flexible work hours or locations, recognition and rewards, flexible scheduling, and a positive workplace culture.

TOPIC 4.2

Evaluating Performance Using KPIs



BUSINESS CASE

Students explore how an entrepreneur develops and uses KPIs to measure the effectiveness of strategy and the business's progress toward its goals.



PROJECT LINK

Customer/Market, Operations, Finance/Accounting

Task 2: Identify KPIs and benchmarks related to customer-related goals, market-related goals, operations-related goals, and finance-related goals.

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
4.2.A Describe key performance indicators (KPIs) used to evaluate business performance.	**4.2.A.1** A *key performance indicator (KPI)* is a data point used to measure a business's performance, including progress toward short- and long-term goals and the effectiveness of strategy.
	4.2.A.2 Managers select KPIs that relate to their stated mission and goals, profitability, and their ability to remain competitive and viable in the long term. KPIs vary based on the characteristics of the business and the industry in which it operates.
4.2.B Develop or interpret financial and nonfinancial KPIs to monitor a business's financial health and progress toward goals.	**4.2.B.1** Businesses monitor financial health using a variety of KPIs, such as revenue, gross profit, gross profit margin, operating profit, operating profit margin, COGS, operating expenses, and cash flow.
	4.2.B.2 Businesses measure progress toward marketing and sales goals using a variety of KPIs, such as customer acquisition cost, customer lifetime value, customer satisfaction ratings, customer retention data, total sales, and market share.
	4.2.B.3 Businesses measure progress toward operations goals using a variety of KPIs, such as per-unit cost, delivery cost, order accuracy, and percentage of deliveries received on time.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
4.2.C Explain how businesses use benchmarks.	**4.2.C.1** A *benchmark* is a reference point used to compare data to a standard. Businesses may base benchmarks on internal historical data or external industry standards. **4.2.C.2** Businesses compare KPI data to selected benchmarks to assess performance against a known standard.

TOPIC 4.3

Strategy and Decision Making



BUSINESS CASE

Students explore how an entrepreneur uses evidence to make a strategic decision.



PROJECT LINK

Organization

Task 3: Make a strategic decision to address a problem or opportunity using the PACED model.

Required Course Content

LEARNING OBJECTIVE

4.3.A

Explain how and why businesses develop and use strategy to achieve goals.

ESSENTIAL KNOWLEDGE

4.3.A.1

A strategy is a plan or approach to achieving a goal. *Business strategy* describes how a business will achieve one or more goals, such as achieving competitive advantage, fulfilling the business's mission, increasing revenues, reducing costs, or increasing profits. Businesses pursue differing strategies based on their unique capabilities, their competitive landscape, and their industry.

4.3.A.2

Businesses typically identify, gather, and track specific data to define a strategy, evaluate the effectiveness of the strategy, and modify the strategy. This data often includes information about a business's financial performance, customers, competitors, or broader trends in the business's market.

4.3.A.3

Defining a clear strategy facilitates the mobilization and alignment of resources to meet an articulated goal or address a challenge, thus increasing the likelihood of success.

4.3.A.4

Businesses use strategy to guide decision making and the development of tactics, which are actions or approaches intended to advance the strategy.

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LEARNING OBJECTIVE

4.3.B
Apply a deliberative process to make a business decision.

ESSENTIAL KNOWLEDGE

4.3.B.1
Managers and individuals often use deliberative processes to make major decisions. A deliberative process includes defining the problem to address or decision to be made, developing alternatives (or options), establishing decision-making criteria, and evaluating alternative courses of action to decide on the best approach, which may be referred to as the PACED model.

4.3.B.2
Decision-making criteria include key costs and benefits to be considered, including both quantifiable costs and benefits (e.g., impact on production costs, total sales, and profits) and intangible costs and benefits (e.g., impact on reputation, mission, and core values).

4.3.B.3
Decision-making criteria typically include financial considerations such as which option provides the greatest return on investment (ROI), which is a measure of the additional profit generated by an investment divided by the cost of the investment. Criteria may also include market considerations (e.g., the implications of each option in terms of competitiveness), operational considerations (e.g., the impact of each option on supply chain risk), and organizational considerations (e.g., the impact of each option on employees).

4.3.B.4
Managers use strategic frameworks to evaluate alternative courses of action. Strategic frameworks allow businesses to systematically evaluate relevant internal and external variables of an option against long-term goals and strategy.

4.3.B.5
Managers sometimes must prioritize conflicting criteria with limited or imperfect data, resulting in imperfect decision making.

TOPIC 4.4

Strategic Frameworks: Porter's Five Forces and SWOT Analysis



BUSINESS CASE

Students explore how strategic framework analysis can help a business evaluate the competitive landscape and the business's internal capabilities.



PROJECT LINK

Market

Task 4: Use strategic frameworks—Porter's Five Forces and SWOT analysis—to evaluate the competitive landscape and the business's internal capabilities.

Required Course Content

LEARNING OBJECTIVE

4.4.A

Describe Michael Porter's Five Forces strategic framework.

ESSENTIAL KNOWLEDGE

4.4.A.1

Michael Porter's Five Forces is a framework used to evaluate the competitive intensity, attractiveness, and potential profitability of a competitive environment. A business may use this framework when making a decision such as which new market to enter or which pricing strategy to adopt.

4.4.A.2

The five forces that shape competition are existing competitive rivalry, threat of new entrants, threat of substitute products, customer power, and supplier power. Each force describes how power held by a participant group (e.g., customers or suppliers) may threaten a business's ability to compete successfully in the environment.

4.4.A.3

Competitive rivalry describes the competitive intensity among existing businesses in the market, determined by the number of rival businesses, the degree of product differentiation, and the extent to which businesses have pricing power. Competitive rivalry is typically understood as the strongest determinant of competition in an environment.

4.4.A.4

Threat of new entrants describes the ease of entry into the competitive environment, which is determined by barriers to entry.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
4.4.A Describe Michael Porter's Five Forces strategic framework.	4.4.A.5 Threat of substitute products describes the availability of substitute goods and services, which are products that can meet the same customer needs but are not direct competitors. 4.4.A.6 Customer power describes the buyers' power to drive prices lower, which is shaped by the number of customers, customer acquisition costs, and customers' switching costs. Switching costs are the monetary and psychological costs a customer incurs as a result of changing the product or brand they buy. 4.4.A.7 Supplier power describes the ability of resource providers to raise input costs—the prices they charge for raw materials and component parts. The competitiveness of the resource market determines how much power suppliers have to raise their prices.
4.4.B Apply Porter's Five Forces to evaluate the competitiveness of a market.	4.4.B.1 An environment is less attractive to a business when the competitive forces are strong, reducing potential profitability. An environment is more attractive to a business when the competitive forces are weak, increasing potential profitability. 4.4.B.2 Businesses evaluate the threat posed by competitive rivalry by identifying the number of direct competitors and the degree to which their product offerings are differentiated. This threat is strong if there are many direct competitors with equivalent products and businesses have little pricing power. 4.4.B.3 Businesses evaluate the threat of new entrants by assessing barriers to entry and determining how easy or difficult it is for new businesses to compete. This threat is strong if barriers to entry are low and new businesses can easily enter and capture market share.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
4.4.B Apply Porter's Five Forces to evaluate the competitiveness of a market.	**4.4.B.4** Businesses evaluate the threat posed by substitute products by determining how easily customers can meet their needs with alternative goods and services. This threat is strong if customers possess access to a variety of alternative products that can meet their needs, particularly if those products are less expensive, easier to access, or higher quality. **4.4.B.5** Businesses evaluate the threat posed by customer power by assessing the number and significance of customers, customer acquisition costs, and customers' switching costs. This threat is strong if there are few customers, each customer represents a large share of sales, acquisition costs are high, and switching costs are low. **4.4.B.6** Businesses evaluate the threat posed by supplier power by assessing the number of potential resource providers and the cost of switching resource providers, as these factors affect the ability of suppliers to increase a business's input costs. This threat is strong if there are few resource providers to choose from and the cost to switch to a new provider is high.
4.4.C Describe SWOT analysis factors used to evaluate business viability.	**4.4.C.1** *SWOT analysis* is a framework used to evaluate internal and external factors that influence a business's ability to accomplish its goals and remain competitive. **4.4.C.2** The four factors included in SWOT analysis are strengths, weaknesses, opportunities, and threats. **4.4.C.3** Strengths are internal advantages, such as core competencies, brand recognition, intellectual property, product quality, ample funds, skilled employees, and supply chain efficiency.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
4.4.C Describe SWOT analysis factors used to evaluate business viability.	**4.4.C.4** Weaknesses are internal disadvantages, such as missing core competencies, low brand recognition, product flaws, limited funds, inability to staff skilled employees, poor customer service, outdated technology, and supply chain risks. **4.4.C.5** Opportunities are external factors beyond a business's control that may contribute to a business's success, such as market growth, reduced competition, technology advancements, and favorable changes in government regulation. **4.4.C.6** Threats are external factors beyond a business's control that may negatively impact the business, such as rising input costs, natural disasters, unfavorable changes in government regulation, and disruptive innovation that fundamentally changes the way customers meet their needs.
4.4.D Apply SWOT analysis to assess a business's internal capabilities and external opportunities and threats.	**4.4.D.1** SWOT analysis evaluates a business's internal capabilities, such as financial, physical, and human resources, as well as intangible assets, such as brand recognition, reputation, and intellectual property. These internal capabilities may be assessed in relation to rivals, industry benchmarks, past performance, and external factors to determine whether they constitute a strength or weakness. **4.4.D.2** SWOT analysis evaluates external factors—including potential market size, customer preferences, PESTEL (political, economic, social, technological, environmental, and legal) factors, and Porter's Five Forces—to determine whether they create a favorable climate for the business. **4.4.D.3** Businesses use the results of SWOT analysis to make strategic decisions about how to build on strengths, address weaknesses, capitalize on opportunities, and respond to threats.

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AP BUSINESS WITH PERSONAL FINANCE

UNIT 5

Personal Goals, Budgeting, and Investing



FINANCIAL ADVISOR PROJECT



~24
CLASS PERIODS
(+20 CLASS PERIODS FOR ADDITIONAL PERSONAL FINANCE COVERAGE)

Personal Goals, Budgeting, and Investing

Developing Understanding

In Unit 5, students connect the personal finance concepts they have learned throughout the course—the influence of PESTEL factors and career considerations in Unit 1; consumer decision making in Unit 2; saving, borrowing, and investing in Unit 3; and earning income in Unit 4—and explore in greater depth concepts such as taxes, risk, and insurance. Students practice interpreting a pay stub, planning a household budget, and analyzing how risk tolerance, time horizon, and spending habits impact a household's ability to build long-term financial security.

In this unit, students engage in a culminating Financial Advisor Project that combines their understanding of personal finance with their deliberative decision-making skills. Through this project, they prepare meaningful recommendations to help a fictional household achieve long-term financial goals related to postsecondary education, housing, retirement, and charitable giving.

This unit helps prepare students for future financial success, including planning for postsecondary education and developing thoughtful habits around spending and saving.

Building Course Skills: Financial Advisor Project

In Unit 5, students practice interpreting and presenting personal financial data and describing factors that create opportunities or problems for a fictional household, including issues such as debt, loss of income, and financial market volatility. As part of the project, students examine potential courses of action that could help the household achieve its goals (e.g., managing spending or taking on more risk) and recommend a course of action that aligns with the household's current situation, future needs, and risk tolerance.

Preparing for Your Financial Future

Unit 5 engages students in thinking deeply about long-term financial goals and the challenges households often face in pursuit of those goals. By acting as a financial consultant in a realistic scenario, students learn in a low-stakes environment how personal decisions (e.g., taking on excessive debt) and external factors (e.g., housing or medical costs) can pose obstacles to financial success. The skills and knowledge students acquire can help them manage similar challenges and apply effective decision-making skills in the future.

UNIT AT A GLANCE

Topic	Financial Advisor Project Activity	Personal Finance Standards*	24 Class Periods**
5.1 Taxes, Net Income, and Budgeting	Task 1: Identify financial goals. Task 2: Analyze income and spending.	Earning Income 12-6 Earning Income 12-7 Earning Income 12-8 Earning Income 12-9 Managing Risk 12-9	8
5.2 Managing Personal Risk	Task 3: Evaluate insurance and risk management.	Managing Risk 12-1 Managing Risk 12-2 Managing Risk 12-3 Managing Risk 12-4 Managing Risk 12-5 Managing Risk 12-7 Managing Risk 12-8 Managing Risk 12-10 Managing Risk 12-12	4
5.3 Saving and Investing for Education, Housing, and Retirement Goals	Task 4: Evaluate investment, saving, and giving strategies.	Earning Income 12-10 Spending 12-6 Saving 12-8 Investing 12-1 Investing 12-4 Investing 12-6 Investing 12-7 Investing 12-8 Investing 12-9 Investing 12-10 Investing 12-11 Investing 12-13 Investing 12-14 Credit 12-3 Credit 12-4 Credit 12-5	7
Students finalize their Financial Advisor Project	Culminating Event: Advising the clients		5

NOTE: An additional 20 class periods can be allocated to further personal finance coverage.

*The personal finance standards listed refer to the National Standards for Personal Financial Education (2021). See the Appendix (p. 285) for a complete list and accompanying descriptions. Topics in this unit focus entirely on personal finance concepts aligned to the Council for Economic Education/Jump$tart Coalition National Standards for Personal Financial Education; as such, no additional topic margin notes are provided to highlight specific alignment.

**Total class periods are inclusive of course content and Financial Advisor Project activities.

TOPIC 5.1

Taxes, Net Income, and Budgeting

Required Course Content

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
5.1.A Identify types of taxes paid by individuals.	**5.1.A.1** Individuals pay taxes to federal, state, and local governments, including income taxes, capital gains taxes, specific payroll taxes, property taxes, and sales taxes. The types of taxes and amount of taxes paid varies by state.
	5.1.A.2 Income taxes are the percentage of income that individuals pay to the government. For employees, a portion of each paycheck is typically withheld and paid to the government directly by the employer. Individuals or households file an annual income tax return to pay the remainder or, in the case of overpayment, receive a refund. Self-employed individuals are responsible for submitting their income taxes to the government.
	5.1.A.3 Capital gains taxes are paid when an individual receives a capital gain. Capital gains taxes are submitted with an individual's or household's income tax return but paid at a different (typically lower) tax rate than income tax.
	5.1.A.4 Certain payroll taxes fund specific government insurance programs and are also withheld from employee paychecks. In the U.S., these programs include Social Security, Medicare, Medicaid, and unemployment benefits. Employers are responsible for paying half of these taxes; self-employed individuals and contract workers must pay the full amount themselves.

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PERSONAL FINANCE LINK

Earning Income

Earning Income 12-6

Earning Income 12-7

Earning Income 12-8

Earning Income 12-9

Managing Risk

Managing Risk 12-9

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
5.1.A Identify types of taxes paid by individuals.	5.1.A.5 Property taxes are based on the value of an individual's property, including houses, land, and cars. Property tax bills may be paid annually, semi-annually, or monthly.
	5.1.A.6 Sales taxes are based on the sales price of an item and are typically collected by the business selling the item. The business, such as a retail store, submits sales tax payments to the government.
5.1.B Explain why individuals and households pay different amounts of federal income tax in the U.S.	5.1.B.1 The amount of income tax paid by an individual or household varies based on the individual's or household's income level, as well as tax deductions and tax credits.
	5.1.B.2 The U.S. federal income tax (and some state income tax) is progressive, meaning that individuals and households earning higher incomes pay higher tax rates.
	5.1.B.3 Individuals and households may qualify for specific tax deductions, which reduce their taxable income and thus the taxes owed. Tax deductions may include interest on a home mortgage, contributions to retirement accounts, the value of charitable donations, the amount paid in state and local taxes, and some medical expenses.
	5.1.B.4 Individuals and households may qualify for specific tax credits, which directly reduce the amount of taxes owed. Tax credits may include a child tax credit, a child or dependent care tax credit, an education tax credit, or credits for specific purchases.
5.1.C Determine and describe components of an individual's pay stub.	5.1.C.1 An individual's pay stub includes gross income (pay), mandatory and voluntary deductions, and net income (pay).

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LEARNING OBJECTIVE

5.1.C

Determine and describe components of an individual's pay stub.

ESSENTIAL KNOWLEDGE

5.1.C.2

Gross income is the total amount of income earned during a pay period. Gross income is determined by an annual salary (divided into pay periods), hours worked during a pay period, a specific contracted amount, or another compensation scheme.

5.1.C.3

Mandatory deductions from gross income are required by federal, state, and/or local laws and must be withheld by an employer. These deductions typically include income taxes and specific payroll taxes.

5.1.C.4

Voluntary deductions from gross income include any money the individual has set aside for employer-sponsored benefits such as health insurance, health and/or dependent care savings plans, life insurance plans, retirement savings, and union dues.

5.1.C.5

Some deductions are pretax deductions, which means the income allocated to these items is not included as part of taxable income. Pretax deductions can be an incentive to save because they reduce an individual's tax liability.

5.1.C.6

Net income or net pay is the amount of money an individual receives from an employer (as a paycheck) after all deductions are removed and may differ significantly from gross income.

TOPIC 5.2
Managing Personal Risk



PERSONAL FINANCE LINK
Managing Risk
Managing Risk 12-1
Managing Risk 12-2
Managing Risk 12-3
Managing Risk 12-4
Managing Risk 12-5
Managing Risk 12-7
Managing Risk 12-8
Managing Risk 12-10
Managing Risk 12-12

Required Course Content

LEARNING OBJECTIVE

5.2.A
Identify types of insurable risks individuals face.

ESSENTIAL KNOWLEDGE

5.2.A.1
Individuals face a variety of personal financial and physical risks; for example, the risk of a car accident that causes expensive damage or an illness that limits a person's ability to work.

5.2.A.2
Insurable risks are risks that involve a potential loss due to chance, such as an accident or weather event. In order to be considered insurable, a risk must also be quantifiable and statistically predictable, which means that an insurer can estimate the cost and likelihood of a potential loss.

5.2.A.3
Personal risk is an insurable risk involving the health and well-being of the insured individual, such as injury from an accident or suffering due to illness.

5.2.A.4
Property risk is an insurable risk involving property loss, such as damage to the insured individual's home or car.

5.2.A.5
Liability risk is an insurable risk involving another entity's or individual's property or personal health, such as damage to a parked car or a pedestrian caused by reckless driving.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
5.2.B Describe types of insurance individuals use to protect themselves from financial loss.	**5.2.B.1** Individuals can purchase different types of insurance, such as health insurance, auto insurance, homeowner's insurance, renter's insurance, and life insurance, to protect themselves from financial loss due to insurable risks.
	5.2.B.2 Insurance buyers pay an annual, semi-annual, or monthly premium for an insurance policy with a desired amount of coverage, and they can file a claim for reimbursement in the event of a financial loss.
	5.2.B.3 Health insurance reimburses policy owners for medically necessary health care and in some cases preventive care. Health insurance may be provided as an employee benefit where the employer pays some or all of the premiums.
	5.2.B.4 Auto, homeowner's, and renter's insurance policy holders can file claims for reimbursement for financial losses to personal property, as well as the cost of legal liability for any damage they cause to other people or property.
	5.2.B.5 Life insurance provides funds to designated beneficiaries in the event of the insured person's death and is often intended to replace lost income, pay end-of-life expenses, and/ or fund dependents' future financial needs.
	5.2.B.6 Extended warranties and service contracts on expensive purchases such as cars or appliances may serve as a type of insurance.
5.2.C Recommend appropriate insurance coverage based on an individual's or household's risk tolerance and needs.	**5.2.C.1** The amount and type of insurance coverage an individual or household needs depend on a variety of factors, including legal requirements, risk tolerance, and number of dependents.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
5.2.C Recommend appropriate insurance coverage based on an individual's or household's risk tolerance and needs.	**5.2.C.2** Some types of insurance are required; legal requirements vary between states (and nations). Most U.S. states require auto liability insurance, and lenders who provide home mortgages require homeowners to buy property insurance. **5.2.C.3** Individuals are typically able to decide how much insurance to purchase and how much risk to bear themselves. Individuals with low risk tolerance may purchase more comprehensive insurance with higher premiums to avoid unanticipated costs later, while individuals with higher risk tolerance may purchase less comprehensive insurance or insurance with higher deductibles, knowing that they may face higher out-of-pocket costs in the event of an emergency. **5.2.C.4** Individuals with dependents may require more insurance, such as family health insurance, insurance on multiple vehicles, and more life insurance to provide for dependents' future financial needs. **5.2.C.5** Individuals can reduce insurance premiums by reducing risky behavior; for example, by maintaining a good driving record (auto insurance) or by not smoking (life insurance). **5.2.C.6** Misrepresentation and falsified claims by individuals are considered insurance fraud, which is a crime. Misrepresentation of policies and benefits by insurance sellers is also insurance fraud.
5.2.D Explain how individuals and households can protect themselves from risks associated with financial fraud.	**5.2.D.1** Individuals and households face personal and financial risks due to predatory lending practices (e.g., deception and aggressive sales tactics) and fraudulent activities such as phishing, identity theft, and online scams.

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LEARNING OBJECTIVE

5.2.D

Explain how individuals and households can protect themselves from risks associated with financial fraud.

ESSENTIAL KNOWLEDGE

5.2.D.2

Individuals and households can protect themselves from predatory lending practices and products by comparing loan terms from a variety of sources, resisting pressure to quickly agree to loan terms, and seeking advice from nonprofit credit counselors before signing a loan agreement.

5.2.D.3

Individuals and households can protect themselves from financial fraud by evaluating the credibility of financial offers, resisting pressure to share personal or financial information online or by phone, freezing their own credit, and seeking legal aid if they have been a victim of a scam.

TOPIC 5.3

Saving and Investing for Education, Housing, and Retirement Goals



PERSONAL FINANCE LINK

Earning Income
Earning Income 12-10
Spending
Spending 12-6
Saving
Saving 12-8
Investing
Investing 12-1
Investing 12-4
Investing 12-6
Investing 12-7
Investing 12-8
Investing 12-9
Investing 12-10
Investing 12-11
Investing 12-13
Investing 12-14
Credit
Credit 12-3
Credit 12-4
Credit 12-5

Required Course Content

LEARNING OBJECTIVE

5.3.A
Explain how financial planning supports an individual's ability to achieve goals related to postsecondary education, housing, retirement, and charitable giving.

ESSENTIAL KNOWLEDGE

5.3.A.1
Long-term individual or household financial goals often include paying for postsecondary education (either for oneself or for a dependent), buying a home, and/or saving for retirement.

5.3.A.2
Postsecondary education decisions, such as where to attend school and what to study, depend on individual career goals and available funding. Postsecondary education is typically financed by a combination of savings, student loans, scholarships, grants, and work-study programs. Federal student loans may have lower interest rates and more favorable repayment terms than private student loans and may be government subsidized.

5.3.A.3
Housing decisions, such as where to live and whether to rent or buy a home, depend on individual preferences and available funding. Home purchases are typically financed by a combination of savings (a down payment) and borrowing, which requires qualifying for a mortgage loan. Monthly mortgage payments vary depending on the size of the loan, the repayment period, and the interest rate, which may be fixed or adjustable.

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LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
5.3.A Explain how financial planning supports an individual's ability to achieve goals related to postsecondary education, housing, retirement, and charitable giving.	**5.3.A.4** Retirement decisions, such as when to retire and where to live in retirement, depend on individual preferences, personal health and well-being, and available funding. Retirement income typically comes from a combination of Social Security (in the U.S.), employer-sponsored retirement plans, personal investments, and continued earnings. **5.3.A.5** Families with combined finances (e.g., two-income married couples) can reduce potential financial strife by discussing and sharing long-term financial goals. **5.3.A.6** Some types of financial technology, such as automated savings plans or payroll deduction for retirement accounts, can overcome barriers that make saving difficult. **5.3.A.7** Decisions related to charitable giving, such as which organizations to support and the type of giving (e.g., one-time gifts, recurring donations, and legacy contributions), depend on individual goals and how they align to the mission and impact of nonprofit organizations. Charitable giving may have financial benefits, such as tax deductions.
5.3.B Describe factors that impact an individual's or household's return on financial assets.	**5.3.B.1** Individuals or households saving toward long-term financial goals may choose to hold their funds in a variety of financial assets including savings vehicles (e.g., savings accounts and CDs), individual stocks and bonds, and/or mutual funds that invest pooled money in stocks and/or bonds. **5.3.B.2** Individuals who begin saving and/or investing at a young age and hold financial assets for a long time are able to realize greater returns, due to compounding, than individuals who wait until later in life to begin saving and/or investing.

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LEARNING OBJECTIVE

5.3.B
Describe factors that impact an individual's or household's return on financial assets.

ESSENTIAL KNOWLEDGE

5.3.B.3
Financial assets vary with regard to potential risk (of losses) and expected returns. Some assets are low risk because they are government insured or provide guaranteed income. These assets typically have lower expected returns. Other assets, such as individual stocks, are higher risk because the value of the asset depends on the success of the business, but these assets are expected to provide higher returns.

5.3.B.4
Individuals may face costs associated with buying, selling, and holding financial assets, including transaction fees, management fees, and fees for professional advice, which decrease return on investment. Individuals cannot purchase stocks or bonds without a broker, so many investors choose discount brokerage firms that charge lower fees and provide less investment advice than full-service firms.

5.3.B.5
Taxes on investment returns, such as interest, dividends, and capital gains, decrease the return on investment. Investors often consider tax implications, including whether taxes must be paid and if so at what rate, when choosing financial assets.

5.3.B.6
Inflation decreases the real return on an investment because inflation reduces the purchasing power of money over time. Investors typically consider both nominal (unadjusted) and inflation-adjusted returns when choosing financial assets.

5.3.B.7
Common behavioral biases, such as overconfidence or loss aversion, may cause investors to make decisions that adversely impact their return on investment. Overconfidence may cause investors to take unnecessary risks, while loss aversion may cause investors to sell financial assets prematurely at a loss.

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LEARNING OBJECTIVE

5.3.C
Recommend a saving and investment plan based on the postsecondary education, housing, and retirement goals, time horizon, and risk tolerance of an individual or household.

ESSENTIAL KNOWLEDGE

5.3.C.1
Individuals or households pursuing long-term financial goals must decide how to allocate their funds among different financial assets. Typical considerations include how much funding is required, how much an individual or household can save each pay period, the investing time horizon, risk tolerance, and the expected rate of return from each type of asset.

5.3.C.2
Individuals or households with a longer time horizon are more likely to invest in financial assets with higher risk and higher expected return because they are able to wait for assets to regain value after a downturn. Individuals or households with a shorter time horizon are more likely to invest in safer financial assets because they may need to liquidate a financial asset during a downturn, which could result in losses or lower than expected returns.

5.3.C.3
Individuals or households with low risk tolerance typically use safer financial assets, such as federally insured savings accounts and CDs, and receive a lower rate of return, while those with higher risk tolerance are more likely to invest in financial assets such as stocks and mutual funds.

5.3.C.4
Individuals and households may seek advice from financial professionals to help evaluate their saving and investment options. Individuals and households seeking professional investment advice typically consider licensing, certifications, education, experience, and cost when selecting an advisor.

5.3.C.5
Financial advisors often suggest a diversification strategy, which means allocating funds to a variety of financial assets with different levels of risk and expected rates of return. Diversification allows investors to seek higher long-term returns without taking on excessive risk.

5.3.C.6
Individuals and households often compare the performance of their financial assets against a benchmark, such as a stock or bond index.

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AP BUSINESS WITH
PERSONAL FINANCE



Guide to Teaching with Cases

Guide to Teaching with Cases

Why Teach with Cases

Business cases immerse students in real-world scenarios, fostering critical thinking, problem-solving, and decision-making skills essential for success in business. Case-based instruction is widely used by business schools, which is why cases are a core component of the AP Business with Personal Finance course. Through case analysis, students apply course concepts, develop key career skills such as collaboration and communication, and develop the analytical skills that support success on the AP Exam, in future coursework, and in their careers.

Cases used within this course fall into one of two categories:

- **Evaluation cases** illustrate how a business has capitalized on an opportunity or addressed a problem.
  - The DK Coffee Lab, Part 3 and Hershey evaluation cases include unique supplements to guide students in the development of the technical skills associated with creating financial statements.
- **Decision-making cases** describe a business facing a choice and ask students to recommend and support a course of action.

Recognizing the case type can help teachers determine the most effective way to facilitate discussion, frame relevant questions, and connect the case to course content.

Facilitating Case Discussions

Effective case teaching relies on meaningful classroom discussion that:

- Actively engages with course materials
- Deepens understanding of course concepts
- Strengthens use of business vocabulary
- Promotes critical thinking and peer collaboration

Case discussions can take place in whole-class or small-group formats. Dedicating class time to unpack case studies is essential for deepening students' understanding of course content and skills. The discussion questions below can help generate student interest and support student discourse. The teaching note for each AP-provided case offers specific discussion questions that focus on new content introduced in each case.

Types of Discussion Questions

The following question types can support meaningful dialogue by helping students analyze cases, explore perspectives, and apply business concepts in thoughtful ways:

- **Opening questions (engagement and comprehension)** spark student engagement and active involvement in the discussion.
  - Examples: "What was the most surprising part of this case?" "What is the central problem or opportunity in this situation?"

- **Decision-making questions** encourage students to take a stance and defend their reasoning.
  - Examples: "If you were the CEO, would you expand internationally or focus on domestic growth? Why?" "Should the company raise prices or cut costs to increase profitability?"
- **Hypothetical *what if?* questions** encourage creative thinking by considering alternate scenarios.
  - Examples: "What if the company had invested in digital marketing earlier?" "How would the situation change if the business had twice the marketing budget?"
- **Ethical or moral dilemma questions** explore values, ethics, and corporate responsibility.
  - Examples: "Should a company prioritize profits or employee well-being?" "Is it ethical for a business to use customer data for targeted advertising?"

Resources for Teaching with Cases

Each case provided by the AP Program aligns to a course topic and specific course skills. All cases—along with teaching notes and optional student questions—are accessible from AP Classroom. Case links in AP Classroom direct students to the case study and initial reading and practice questions; teachers have access to additional materials including a teaching note that includes an opening activity, suggested student responses, and open-ended discussion questions to support classroom instruction.

Teachers are encouraged to use the AP-provided cases and teaching notes but may also find or create their own. Any case material should:

- Be written at an introductory college level
- Illustrate unit objectives through real-world business situations
- Provide opportunities for students to identify business opportunities and problems, evaluate potential courses of action, and practice decision making

TEACHING NOTES

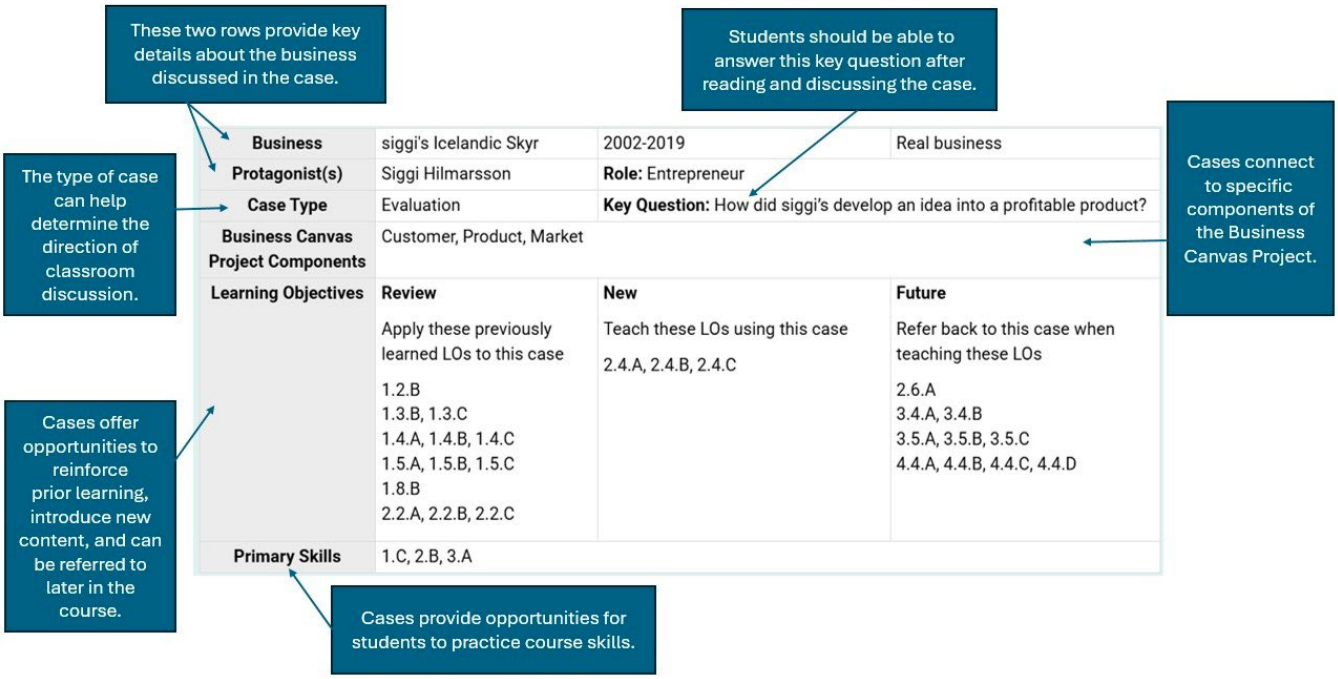
Each teaching note that accompanies the AP-provided cases includes the following:

- **Case overview:** The table on p. 142 outlines key details of the case and its connections to the AP Business with Personal Finance Course Framework and the through-course Business Canvas Project.
- **Opening activity:** This is a short activity designed to spark student interest.
- **Student-facing questions:** Questions appear for students and teachers alike, accompanied by answer keys for teacher use.
  - **Reading questions:** Consistent across cases, these questions help students to identify the key facts of the case.
  - **Practice questions:** These scaffolded questions allow students to apply previously learned content and skills to the case and offer valuable preparation for the AP Exam.
- **Discussion questions:** These questions are designed to guide classroom dialogue and connect the case to the targeted new course content and skills, and to answer the case's key question, which can be found in the case overview table. Key takeaways that may come out of the discussion are provided for teachers.

TEACHER TIP

The third reading question asks students to identify an opportunity or challenge facing the business in the case. In this context, opportunity should be interpreted as anything that makes it possible for a business or individual to take an action or achieve a goal.

- **Application activity:** This activity encourages students to apply case insights to another context, such as their Business Canvas Project, which reinforces learning transfer and the real-world relevance of course concepts.



Business	siggi's Icelandic Skyr	2002-2019	Real business
Protagonist(s)	Siggi Hilmarsson	**Role:** Entrepreneur	
Case Type	Evaluation	**Key Question:** How did siggi's develop an idea into a profitable product?	
Business Canvas Project Components	Customer, Product, Market		
Learning Objectives	**Review** Apply these previously learned LOs to this case 1.2.B 1.3.B, 1.3.C 1.4.A, 1.4.B, 1.4.C 1.5.A, 1.5.B, 1.5.C 1.8.B 2.2.A, 2.2.B, 2.2.C	**New** Teach these LOs using this case 2.4.A, 2.4.B, 2.4.C	**Future** Refer back to this case when teaching these LOs 2.6.A 3.4.A, 3.4.B 3.5.A, 3.5.B, 3.5.C 4.4.A, 4.4.B, 4.4.C, 4.4.D
Primary Skills	1.C, 2.B, 3.A		

Case Overview Table

Learning Objectives and Primary Skills

Each AP-provided case offers an opportunity to introduce learning objectives (LOs) and review LOs from previous units; the teaching note identifies future LOs that offer opportunities to revisit the case.

Cases play a vital role in helping students develop Skill Category 3: Decision Making. By engaging with real-world business scenarios, students learn to:

- Describe factors that affect a business and explain how and why they create opportunities and/or problems (Skill 3.A)
- Explain how potential courses of action could allow a business to capitalize on an opportunity or solve a problem (Skill 3.B)
- Establish decision-making criteria and use them to evaluate different courses of action a business may take (Skill 3.C)
- Recommend a course of action and support the recommendation with reasoning and evidence (Skill 3.D)

While not every case will address all skills within a category, the overview table and case type indicate the specific decision-making skills supported in each case.

Connection to the Business Canvas Project

Cases provide students with opportunities to practice business skills and apply insights to their Business Canvas Project. Each case highlights aspects of the business that relate to specific components of the Business Canvas Project, helping students understand how concepts apply in real-world contexts. This understanding can then be directly applied to their own business ideas.

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Business Canvas Project Guide

Project at a Glance

Project Overview

The Business Canvas Project invites students—working alone or in teams of up to three—to apply course skills and content to an entrepreneurial idea of their choosing. This entrepreneurial idea (a good or service) must address an identified customer problem, need, or want. Though students are not expected to launch their business, the project is a required course component and students will be assessed on their project work through the Business Canvas Project Exam-Day Validation FRQ on the AP Exam. The project should be introduced in Unit 1 and integrated throughout Units 2–4. The Unit at a Glance tables in each Unit Guide include a suggested number of days for the Business Canvas Project and specific tasks to be accomplished within each unit and topic. The recommended pacing also includes a suggestion of approximately 10 days at the end of Unit 4 for students to finalize their Business Canvas Project and, if locally desired, tailor it for submission to various student business competitions. Recommended completion dates for each unit's project deliverables are included in this guide.

Project Goals

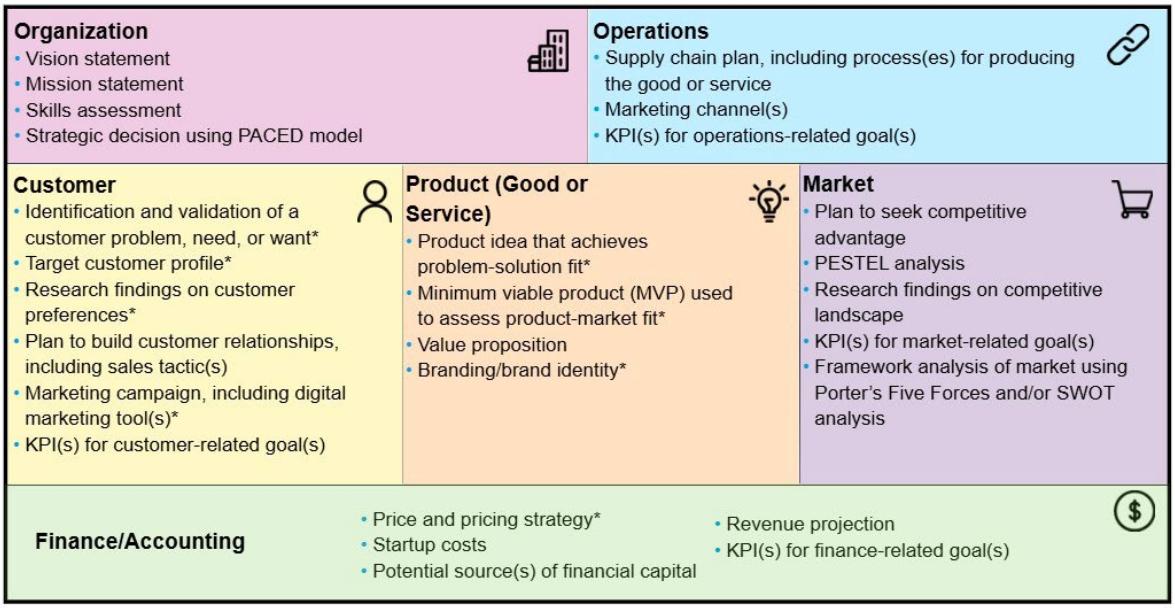
The Business Canvas Project provides students the opportunity to actively engage in real-world and personally meaningful project tasks as they acquire and master career-relevant skills and content knowledge.

Students gain entrepreneurial skills (Skill Category 2) as they identify a market opportunity, develop a product idea, test business hypotheses, and assess and explain the desirability, viability, and feasibility of their product. Through their project work, students also practice applying business concepts (Skill Category 1), making business decisions (Skill Category 3), communicating their ideas and findings (Skill Category 4), and collaborating meaningfully with peers (Skill Category 5). All project tasks (pp. 151–178) are aligned to both skills and learning objectives.

Some high school business teachers utilize class time to help students prepare their entries for various contests and competitions. The Business Canvas Project aligns well with these efforts. Note any differences between the AP Business Canvas Project requirements and those of specific competitions so students who want to enter competition(s) can extend their work to fulfill any additional contest requirements.

Project Description

The Business Canvas Project has six components: Organization, Operations, Customer, Product (Good or Service), Market, and Finance/Accounting. Students develop project deliverables related to each component throughout the course, as well as an appendix containing a written pitch, a projected income statement, and a data visualization. The Business Canvas Project image on p. 145 illustrates the components of the Business Canvas Project with the specific project deliverables associated with each component. A business canvas template for students to use is available on page 148, and on AP Classroom.



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Project components are integrated into Units 1–4. The chart on page 147 illustrates the required project deliverables to be completed by the end of each unit.

UNIT 1

In Unit 1, students identify a potential customer with a problem, need, or want; conduct customer interviews; develop their initial product idea; validate problem-solution fit; build a team (if applicable); evaluate a potential market; and prepare drafts of the following deliverables after conducting hypothesis testing where required:

- Customer – Identification and validation of a customer problem, need, or want*
- Product – Product idea that achieves problem-solution fit*
- Organization – Vision statement
- Organization – Mission statement
- Operations – Supply chain plan, including process(es) for producing the good or service
- Market – Plan to seek competitive advantage
- Market – PESTEL analysis

UNIT 2

In Unit 2, students continue to conduct research, including both primary-source customer research and secondary-source market research, using their findings to develop key elements of a marketing plan that includes digital marketing tool(s). By the end of Unit 2, students should have prepared drafts of the following deliverables after conducting hypothesis testing where required:

- Customer – Target customer profile*
- Customer – Plan to build customer relationships, including sales tactic(s)
- Customer – Research findings on customer preferences*

- Customer – Marketing campaign, including digital marketing tool(s)*
- Product – Minimum viable product (MVP) used to assess product-market fit*
- Product – Value proposition
- Product – Branding/brand identity*
- Operations – Marketing channel(s)
- Market – Research findings on competitive landscape
- Finance/Accounting – Price and pricing strategy*
- Appendix – Data visualization

UNIT 3

In Unit 3, students determine the financial requirements to launch their product and operate their business as a means of hypothesis testing its viability. By the end of Unit 3, students should have drafts of the following deliverables:

- Finance/Accounting – Startup costs
- Finance/Accounting – Potential source(s) of financial capital
- Finance/Accounting – Revenue projection
- Appendix – Pitch
- Appendix – Actual or projected income statement

UNIT 4

In Unit 4, students set measurable goals for their business idea, practice using the PACED (problem, alternatives, criteria, evaluation, and decision) strategic decision-making model, and use business frameworks to evaluate and decide on possible courses of action, culminating in a holistic assessment of the desirability, viability, and feasibility of their product. At the end of Unit 4, students revise and finalize all components of their business canvas and appendix, including the following new deliverables:

- Customer – KPI(s) for customer-related goal(s)
- Organization – Skills assessment
- Organization – Strategic decision using PACED model
- Operations – KPI(s) for operations-related goal(s)
- Market – KPI(s) for market-related goal(s)
- Market – Framework analysis of market using Porter's Five Forces and/or SWOT analysis
- Finance/Accounting – KPI(s) for finance-related goal(s)

Business Canvas Project Deliverables

	Unit 1 by end of Week 8	Unit 2 by end of Week 15	Unit 3 by end of Week 22	Unit 4 by end of Week 28
	Suggested completion milestones indicated above are based on 45-minute classes meeting 5 days a week.			
Customer	Identification and validation of a customer problem, need, or want*	Target customer profile* Plan to build customer relationships, including sales tactic(s) Research findings on customer preferences* Marketing campaign, including digital marketing tool(s)*		Key performance indicators (KPIs) for customer-related goal(s)
Product	Product idea that achieves problem-solution fit*	Minimum viable product (MVP) used to assess product-market fit* Value proposition Branding/brand identity*		
Organization	Vision statement Mission statement			Skills assessment Strategic decision using PACED model
Operations	Supply chain plan, including process(es) for producing the good or service	Marketing channel(s)		KPI(s) for operations-related goal(s)
Market	Plan to seek competitive advantage PESTEL analysis	Research findings on competitive landscape		KPI(s) for market-related goal(s) Framework analysis of market using Porter's Five Forces and/or SWOT analysis
Finance/ Accounting		Price and pricing strategy*	Startup costs Potential source(s) of financial capital Revenue projection	KPI(s) for finance-related goal(s)
Appendix		Data visualization	Pitch Income statement	**Final Business Canvas and Appendix**

*Indicates a canvas element requiring hypothesis testing

BUSINESS CANVAS

The final business canvas may contain up to 1,000 words of text, describing the student's idea. Because project goals emphasize hypothesis testing and the use of evidence to iterate and improve on a product idea, students are expected to use their canvas to track and record evidence of hypothesis testing and document how it informed decision making. At the conclusion of Unit 4, each student—whether working alone or with a team—will complete their own Business Canvas Project with descriptions and specific details that convey their current, best thinking about each required canvas component. The business canvas information may be communicated using bullet points, notes, complete sentences, or a structure of students' choosing. A blank business canvas template is shown below.

Project: Business Canvas Components

Organization	**Operations**	
Customer	**Product (Good or Service)**	**Market**
Finance/ Accounting		

Appendix elements: Data visualization, Pitch, Actual or projected income statement

APPENDIX

The appendix contains three elements developed using evidence acquired through market and customer research findings: a data visualization, a pitch, and an actual or projected income statement.

Pitch

The pitch is designed to convey the merits of a student's business idea. Because the pitch is intended to be delivered in 60 seconds, the pitch should be a maximum length of 200 words. The pitch should include:

- A brief description of the student's product
- The student's target customer profile
- The problem, need, or want the student's product is intended to address
- How or why the student's product creates value for customers

NOTE: Oral pitches are strongly encouraged in the classroom; however, the AP Program does not require recorded oral pitches.

Income Statement

The income statement is an actual or projected financial statement describing the business's year-one performance. The income statement should include, at a minimum, the following elements:

- (Projected) Revenue based on product price and sales projections
- (Projected) Cost of goods sold (COGS) or cost of sales (COS)
- (Projected) Gross profit
- (Projected) Operating expenses
- (Projected) Pretax income

Data Visualization

The data visualization is a bar chart, stacked bar chart, line graph, or pie chart that reflects a finding from the student's market- or customer-related research. The data visualization should be clearly and accurately labeled, and it should represent actual research findings from the Business Canvas Project.

Business Canvas Project Assessment

Collect students' Business Canvas Projects for teacher scoring and incorporation into their course grade. Students will not submit their Business Canvas Project to the AP Program for scoring. A rubric to guide teacher scoring of the Business Canvas Project is provided on p. 182.

Students' work on the Business Canvas Project will be assessed by the AP Program through the Business Canvas Project Exam-Day Validation FRQ on the AP Exam. A student's ability to earn points on the FRQ will **not** depend on the profitability or market potential of their business or product idea but on their demonstration of the course skills and content objectives assessed by each prompt. A sample Business Canvas Project Exam-Day Validation FRQ can be found on p. 249, and the accompanying scoring guidelines begin on p. 259. For more information about the AP Business with Personal Finance Exam, see the Exam Overview section, which begins on p. 237.

Process Overview

Guide students through the ideation and business development process using your preferred entrepreneurial or design thinking process or following the suggested project tasks available in the optional project based learning (PBL) guides created by the AP Program.*

During the project launch, ensure students understand the iterative nature of the entrepreneurial process as well as the purpose and final deliverables of the Business Canvas Project. It is critical to emphasize the importance of developing hypotheses, testing hypotheses, and learning from feedback at every stage of the project. Most students will run into a roadblock at some point; for example, a product idea that customers don't like, a business name that is already trademarked, or difficulty establishing a feasible production process. Some students may need to adapt and adjust key components of their business idea in response to feedback. This is a natural part of launching any business and should be encouraged, not viewed negatively.

Students will practice the systematic approach to decision making described in Skill Category 3, which requires describing an opportunity or problem, explaining how potential courses of action could address the opportunity or problem, establishing criteria to evaluate different courses of action, and recommending the best course to take. In one or more components of the Business Canvas Project, students illustrate how they used these skills to reach a decision.

Project Timing

This project is designed as a through-course project for AP Business with Personal Finance. In this project guide, most tasks are designed to take 1–2 class periods, but you may wish to provide students with more time on certain tasks. The Unit at a Glance tables in each Unit Guide include a suggested number of days for the Business Canvas Project. Suggestions are provided for driving questions, objectives, activities, optional extension activities, and deliverables within each task to better allow you to weave this project into your course and content sequence. The suggested completion date for each unit is based on integration into a yearlong course of study.

*In AP Business with Personal Finance, project based learning (PBL) engages students in sustained work as entrepreneurs and financial advisors, using AP content and skills to tackle challenging, real-world business and financial problems. Students engage in inquiry-oriented tasks, make authentic choices, develop public products, and continuously refine their work through daily instructional activities. Educators who attend an AP Business with Personal Finance PBL AP Summer Institute will have access to the Units 1 – 5 PBL implementation guides. The required project deliverables described in the PBL guides are identical to the deliverables listed in this guide, ensuring a coherent and rigorous course experience.

Unit 1

Suggested completion milestone: ~Week 8 of the course

Unit 1 Deliverables:

- **Customer** – Identification and validation of a customer problem, need, or want* (Topic 1.1, 1.4)
- **Product** – Product idea that achieves problem-solution fit* (Topic 1.4)
- **Organization** – Vision statement (Topic 1.5)
- **Organization** – Mission statement (Topic 1.5)
- **Operations** – Supply chain plan, including process(es) for producing the good or service (Topic 1.8)
- **Market** – Plan to seek competitive advantage (Topic 1.2)
- **Market** – PESTEL analysis (Topic 1.3)

*Indicates a canvas element requiring hypothesis testing

Suggested Tasks

UNIT 1 · TASK 1

Identify and describe a customer's problem, need, or want.

Driving Question

Where do business ideas come from?

Student Objectives

In the first task, students assume the role of an entrepreneur. They look closely at everyday experiences—their own, their family's, or their community's—to spot problems, needs, or wants that could spark new business ideas. The emphasis is on understanding that successful ventures start by solving real problems. Through this process, students learn to:

- Identify a market opportunity (e.g., a customer problem, need, or want) and develop a product idea to address it (Skill 2.A)
- Identify a genuine customer problem and see how businesses respond to customer needs (LO 1.1.A)

Activities

Begin Task 1 with a class conversation. Ask students, "Where do business ideas come from?" Share a few examples from local businesses that fill a gap in your community. From there, guide students through brainstorming ideas.

Students can take one of several routes: reflecting on their own lives or their family's lives, talking to classmates or neighbors, or researching services that are available in other communities but not in theirs. Consider using structured ideation methods (like mind mapping or design thinking) to help students organize their ideas. The goal for this activity is for each student to come away with at least one customer problem, need, or want that they have identified and can explain clearly.

Assessments / Checks for Understanding

As students share or submit their ideas, you'll want to check whether they are framing them as customer problems or needs, rather than just personal likes or dislikes or product ideas. Use an exit slip with a one-sentence response or a short verbal share-out: "What's one problem you think a business could solve?" Their descriptions will indicate whether they're on the right track before moving forward.

Optional Extension Activity

Ask students to take the idea they generated in class and refine it. This could be a one- or two-paragraph description that explains the problem, need, or want in more detail. Encourage them to test the idea by talking with someone outside of class, like a family member or friend, to see if that person also notices the same need. Students will bring this polished version back to class to build upon it in the next task.

Deliverables

At the end of this task, the deliverables are the identification of a potential customer and a description of that customer's problem, need, or want.

UNIT 1 · TASK 2

Develop a plan to seek competitive advantage in a potential market and apply the PESTEL framework to evaluate the attractiveness and potential risks of a market.

Driving Question

How can we analyze a market to understand competition, opportunities, and risks?

Student Objectives

Students broaden their lens to the market context in this task. They identify direct and indirect competitors currently serving their potential customer, then use the PESTEL framework to analyze external forces—political, economic, social, technological, environmental, and legal—that create opportunities and risks for their idea. With that landscape in view, they propose an initial competitive strategy (e.g., a differentiating feature, superior service, or a pricing approach) that fits what the analysis reveals. This task helps students to:

- Interpret relevant data (Skill 1.B)
- Follow through on agreed-upon deliverables, if working in teams (Skill 5.D)
- Develop a plan to achieve competitive advantage in a market. (LO 1.2.B)
- Apply the PESTEL framework to evaluate the attractiveness and potential risks of a market. (LO 1.3.C, Skill 3.A)

Activities

Have students work individually or in small groups to identify competitors who are currently meeting their potential customers' needs. For example, if they identify a problem such as the high cost of smartphone repairs, they would identify all competitors who currently provide these repair services.

Introduce students to the PESTEL framework as a structured way to analyze a market. Use an example they'll recognize (such as the streaming-service or fast-food markets) to show how each factor can influence success or risk. Guide students through applying the PESTEL framework to their chosen market. For students working alone, encourage collaboration with peers who are analyzing similar markets.

Finally, ask students to brainstorm an initial competitive advantage strategy: How will they better address a customer's problem, need, or want? This could be a unique feature, better customer service, or a pricing approach.

Assessments / Checks for Understanding

Collect or review students' PESTEL analyses. During class, check that students are naming both opportunities and risks in each category, not just one side or the other. Ask reflective questions, such as "Which PESTEL factor do you think poses the biggest challenge for your idea?"

Optional Extension Activity

Have students conduct a PESTEL analysis of the market for a familiar product. Students should highlight the three most important risks and opportunities for the product.

Deliverables

By the end of this task, the deliverables are a preliminary PESTEL analysis of a potential market and an initial plan to seek competitive advantage.

UNIT 1 · TASK 3

Conduct customer interviews to validate the problem, need, or want.

Driving Question

How can we confirm that the problem we identified is something that is experienced by multiple potential customers?

Student Objectives

In this task, students shift from spotting a potential problem to testing its validity through customer interviews. The focus is on learning how to talk with and listen to potential customers in a way that gathers honest, unbiased, and useful feedback. Through this process, students:

- Formulate and test business hypotheses to iterate and improve on a product idea (Skill 2.A)
- Create authentic business communications (Skill 4.B)
- Build toward identifying a customer problem, need, or want as they adjust original assumptions based on potential customer feedback (LO 1.1.A)
- Develop strategies for generating new product ideas (LO 1.4.A)

Activities

Start class with a short discussion about the importance of interviews in entrepreneurship, emphasizing how they can help students highlight authentic voices, practice active listening, and gather diverse perspectives. Connect to real-world skills by showing or sharing how interviewing is used in journalism, research, business, and everyday problem-solving. Then guide students through the basics of effective interviewing. Emphasize to students that they should:

- Write open-ended, neutral questions (avoid yes/no or leading questions)
- Practice active listening, showing interest without steering the answers
- Record feedback carefully, either through detailed notes or—with permission—by audio or video recording

Allow students time to draft and peer review a short list of interview questions. Then, with a volunteer student, model what an interview should look like to set expectations. Students can see what active listening looks like in practice.

To help prepare students before they approach interviewees:

- Define "respectful approach." Students should understand the appropriate tone of voice and body language to use when approaching interviewees.
- Practice introductions. Students can role-play saying who they are, what the project is, and why they'd like the interviewee's input.
- Model the development of question lists. Students should keep questions open ended, avoid leading questions, and prepare follow-up prompts.
- Emphasize consent. Students should always ask, "Would you be willing to answer a few questions?"

When students are ready to make contact with interviewees, let them know that they can either draft a polite email request or approach potential interviewees in person using a short elevator pitch of the project. Stress to students the need to respect adults' time by asking for short, specific time slots (10–15 minutes) when scheduling their interviews.

Additionally, be sure students understand the expected professional etiquette: They should thank their interviewee for meeting with them, take notes during the interview, and send a short thank-you note after the interview.

To further support students in this task:

- Provide sample scripts for introductions, emails, and thank-you notes.
- Set boundaries so that students understand who not to approach. Be sure they understand any safety or privacy concerns.

Assessments / Checks for Understanding

Check student preparedness by reviewing their interview questions before they proceed with conducting their interviews. Look for evidence that students' questions are using an open-ended and unbiased approach. When students are practicing mock interviews in class, listen for strong questioning and listening skills. Consider using an exit slip that asks, "What's one strategy you'll use to make sure your customer interview is unbiased?"

Students conduct at least one real customer interview outside of class. Encourage them to go beyond their immediate friend group to obtain more candid, authentic feedback.

When debriefing with students after their interviews, encourage them to reflect on:

- What went well in the interaction?
- What felt awkward or difficult?
- What did you learn about asking good questions and active listening?

Deliverable

By the end of this task, the deliverable is a validated customer problem, need, or want. Ensure that students document how hypothesis testing shaped a decision about which customer problem, need, or want to address.

UNIT 1 · TASK 4

Develop a solution to address a potential customer's problem, need, or want.

Driving Question

How can we develop a product that effectively addresses a customer's problem, need, or want?

Student Objectives

In this task, students move beyond validating that a problem exists and begin designing a solution. Students decide whether the best fit is a good, service, or app, and weigh what skills and resources they already have against what they would need to acquire. This task helps students:

- Identify market opportunities and develop concrete product ideas as they plan for production, supply chains, and costs (Skill 2.A)
- Identify ways businesses respond to customer needs (LO 1.1.A)
- Develop strategies for generating new product ideas (LO 1.4.A)
- Apply a design-thinking process to generate and validate a solution (LO 1.4.C)

Activities

Begin with a short framing conversation: Remind students that entrepreneurs don't just spot problems—they design solutions that people will use. Share a couple of examples of products or services that started small (like a neighborhood service or handmade product) and grew into sustainable businesses.

Then guide students through structured brainstorming by asking them to:

- List possible solutions for the problem they validated in Task 3.
- Consider feasibility: What skills do they already have? What resources could they realistically access?
- Think broadly. Their solution may be a good, a service, an app, etc. (Remind them that while thinking broadly is good for brainstorming, their solution should stay within school safety, health, and legal guidelines.)
- Sketch or outline their solution idea and begin thinking through its basic production process, supply chain, and cost considerations—even at a rough estimate level.

Assessments / Checks for Understanding

Ask students to create a simple one-page product concept summary. This should include:

- A short description of the good or service
- The problem-solution fit—what problem, need, or want it addresses
- A few notes on what resources would be needed to make it work (e.g., materials, time, skills)

This concept summary will become the basis for developing a supply chain plan in Topic 1.8 and for developing a minimum viable product (MVP) in Unit 2.

As students share their solution ideas in the one-page optional extension activity summary, check that they are connecting the solution directly to the problem they validated in Task 2. Look for signs of realistic thinking: Do they understand what it would take to produce this solution? Can they explain why this solution matches the problem?

Optional Extension Activity

Have students draft a written reflection (e.g., "What makes your solution both realistic and responsive to your customer's problem?") to help capture their thinking and as another opportunity to check their understanding at this early stage.

Deliverable

By the end of this task, the deliverable is the product idea to address customer problem, need, or want.

UNIT 1 · TASK 5

Formulate and test a business hypothesis related to problem-solution fit.

Driving Question

How do we test whether our proposed solution addresses a customer problem?

Student Objectives

In this task, students treat their solution idea as an assumption to be tested, not a conclusion. They frame a clear, testable prediction about problem-solution fit—stated as what they expect customers will do if the solution is offered—and prepare a simple plan to check that prediction. The emphasis is on precision and measurability: What behavior would count as evidence that the solution addresses the validated problem? In doing this, students:

- Formulate and test business hypotheses (Skill 2.B)
- Apply a design-thinking process to validate and, if needed, adjust their product idea (LO 1.4.C)

Activities

Start with a simple explanation: In entrepreneurship, we don't assume our solution works—we test it. Share a sample assumption or hypothesis; for example, "If students want healthier after-school snacks, then they will purchase hummus and pretzel cups or fresh fruit if those are offered." Ask students how this hypothesis could be tested, and be sure they understand that gathering opinions does not qualify—they actually need to offer the snacks and count how many students buy them.

Guide students in writing their own hypotheses about their product ideas. Emphasize that hypotheses should be simple, specific, and testable. Then allow time for peer review, where students check one another's statements for clarity and testability.

Assessments / Checks for Understanding

Review student hypotheses to ensure they are phrased as assumptions or predictions, not as open-ended questions. Quick check-ins could include asking, "What exactly are you assuming customers will do?"

Have students design and implement a simple plan to test a hypothesis related to problem-solution fit. For example, they might survey peers, run a short pilot, or observe customer behavior. They should be prepared to share the results in the next class.

Deliverable

By the end of this task, the deliverable is an improved product idea to address the customer's problem, need, or want, with a description of problem-solution fit. Ensure that students document how hypothesis testing shaped a product decision.

UNIT 1 · TASK 6

Develop a vision statement and a mission statement.

Driving Question

How do we communicate our business's values and goals through vision and mission statements?

Student Objectives

In this task, students articulate the "why" behind their work. They decide whether to operate alone or form a small team (see FAQs 8 and 9 on p. 180) and then surface the values and strengths they bring to the venture. From there, students translate the brainstormed values and strengths into vision and mission statements that clearly state what their business aims to achieve and how it will serve customers. As they draft and refine these statements, students:

- Create authentic business communications (Skill 4.B)
- Develop shared objectives, clarify roles, work to motivate one another, and establish accountability routines, if working in teams (Skills 5.A–5.D)
- Explain how their vision and mission align with their goals (LO 1.5.B)

Activities

Begin class by explaining the purpose of vision and mission statements. A vision statement looks forward—it's the long-term aspiration—while a mission statement focuses on the present: what the business does, for whom, and why.

Guide students in reflecting on their own values and skills or on team strengths if they choose to collaborate. If teams are allowed, facilitate their creation by encouraging students to choose partners who share an interest in the same customer problem or who bring complementary skills. One suggestion is to have each student share their idea with the class orally or on sticky notes so students can form small affinity groups based on shared goals.

Provide examples of real companies' vision and mission statements and discuss how they reflect values and business goals. Consider referring to the AP-provided Bombas business case and discuss their "Buy One, Donate One" vision. Then have students draft their own statements, either individually or as a team.

Assessments / Checks for Understanding

As students draft statements, circulate and ask probing questions, such as "Does this statement reflect your company's values?" or "Would someone outside your business understand what you're trying to achieve?" Collect first drafts or have pairs exchange feedback for clarity and alignment.

Optional Extension Activity

Ask students to refine their statements into polished versions that incorporate the feedback they've received.

Deliverables

By the end of this task, the deliverables are the vision statement and mission statement for students' business ideas.

UNIT 1 · TASK 7

Develop a production process and a supply chain plan.

Driving Question

What production process and supply chain would allow us to create and deliver our product?

Student Objectives

In this task, students focus on the feasibility of their good or service by mapping how it could realistically be made and delivered. Students select an appropriate production process (artisan, service based, or manufactured) and draft a supply chain plan from inputs to final delivery. They identify potential sources of necessary resources, name critical steps, and surface barriers, showing their understanding of the requirements to bring their product to market. This process of researching and developing a realistic manufacturing or service-delivery process is challenging for students, so encourage them to focus on smaller scales. This work develops students' ability to:

- Evaluate desirability, viability, and feasibility of a product (Skill 2.C)
- Define clear roles and responsibilities, if working in teams (Skill 5.B)
- Follow through on concrete deliverables (Skill 5.D)
- Describe factors in production (LO 1.8.A)
- Develop and describe a preliminary supply chain plan (LO 1.8.B)

Activities

Begin class by introducing different types of production processes, such as those used to create artisanal goods, personalized services, and manufactured products and explain why businesses may choose each process. Have students consider their supply chain needs in terms of what they've learned about the competitive environment and their preliminary plan to seek competitive advantage, as well as PESTEL factors that could affect supply chain risk.

Have students outline a production process for their product. Encourage them to think through the following questions: What materials are needed? Who supplies them? How would the product get from creation to the customer? Provide a simple template or flowchart or show students how to access and use templates in Google Docs, Google Sheets, or similar tools to help them map their supply chain plan.

Assessments / Checks for Understanding

Review students' initial production and supply chain plans and check for feasibility. Ask reflective questions: "If you needed 100 units, could this process handle it?" "What's one weak spot in your supply chain?"

Optional Extension Activity

Ask students to revise their supply chain plan with more specific details, including possible suppliers and costs even if it's only through online searches, so they can begin grounding their plan in reality.

Deliverable

By the end of this task, the deliverable is a supply chain plan, including process(es) for producing the good or service.

UNIT 1 · TASK 8

At the end of Unit 1, commit to a business idea to pursue and revise the market analysis.

Driving Question

How can we use our understanding of the market to develop a competitive advantage strategy for our product idea?

Student Objectives

As students review their Unit 1 progress on the business canvas project—solidifying their decision about what customer problem, need, or want to address and what kind of product they will offer—they revisit their PESTEL analysis of the market and competitive advantage strategy (from Task 2). Students identify direct and indirect competitors in their market, then use the PESTEL framework to analyze external forces that create opportunities and risks. With that landscape in view, they propose a revised competitive strategy. This task helps students to:

- Interpret relevant data (Skill 1.B)
- Explain the feasibility and viability of a product idea (Skill 2.C)
- Apply the PESTEL framework to evaluate a market and describe findings (Skill 3.A)
- Follow through on agreed-upon deliverables, if working in teams (Skill 5.D)

Activities

Explain to students that Unit 1 provided an opportunity to explore ideas about customer problems and potential solutions. Some students may have discovered already that their initial idea is not desirable or feasible—and they may wish to shift to an entirely new problem and/or solution. Before moving onto Unit 2, students should commit to a business idea that they will pursue for the rest of the through-course project.

Once students have determined what business idea they will pursue, they will revisit their initial market analysis. Have students review the PESTEL framework and work individually or in small groups to describe the market for their product and apply PESTEL analysis. Then ask students to develop a revised competitive advantage strategy, based on their knowledge of their product idea and the competitive landscape: What will set their product apart?

Assessments / Checks for Understanding

Collect or review students' revised PESTEL analysis documents. Ask reflective questions, such as "What insights or challenges prompted you to adjust your competitive advantage strategy?"

Optional Extension Activity

Have students expand their PESTEL analysis into a one-page summary, highlighting the three most important risks and opportunities for their product.

Deliverables

By the end of this task, the deliverables are a revised product idea (if applicable), revised PESTEL analysis of a potential market, and a plan to seek competitive advantage in that market.

Unit 2

Suggested completion milestone: ~Week 15 of the course

Unit 2 Deliverables:

- **Customer** – Target customer profile* (Topic 2.1)
- **Customer** – Plan to build customer relationships, including sales tactic(s) (Topics 2.1, 2.2)
- **Customer** – Research findings on customer preferences* (Topic 2.3)
- **Customer** – Marketing campaign, including digital marketing tool(s)* (Topic 2.7)
- **Product** – Minimum viable product (MVP) used to assess product-market fit* (Topic 2.4)
- **Product** – Value proposition (Topic 2.4)
- **Product** – Branding/brand identity* (Topic 2.4)
- **Operations** – Marketing channel(s) (Topic 2.6)
- **Market** – Research findings on competitive landscape (Topic 2.3)
- **Finance/Accounting** – Price and pricing strategy* (Topic 2.5)
- **Appendix** – Data visualization (Topic 2.3)

*Indicates a canvas element requiring hypothesis testing

Suggested Tasks

UNIT 2 · TASK 1

Identify target customers and develop a customer profile.

Driving Question

Who do we think is most likely to buy the product, and how can we test our assumptions about them?

Student Objectives

In the first task of Unit 2, students shift from focusing on the product itself to focusing on the potential customer. They describe the characteristics of a target market segment, using either established segmentation models (like Nielsen categories) or by creating their own description that includes demographic factors (e.g., age, income, education) and psychographic factors (e.g., values, interests, lifestyle). Students then turn their description into a customer profile—a personified representation of their likely buyer—and develop and test a hypothesis about who this customer is and why they might purchase the product.

The goal is for students to see that not every product is for everyone; entrepreneurs must identify and focus on the customers who are most likely to engage with their products. Along the way, students practice designing thoughtful, unbiased interview questions and learn to test their profile by talking with potential customers who fit the profile. They also build comfort with the idea that negative or lukewarm feedback is valuable—it may show that the profile needs to be refined or even changed.

This task strengthens student ability to:

- Interpret and present data (Skills 1.B and 4.A)
- Evaluate business opportunities through decision-making criteria (Skills 3.B and 3.C)
- Use market segmentation to identify a target customer and develop a detailed customer profile (LO 2.1.B)

Activities

Begin with a short conversation about market segmentation. Share an example of how businesses aim products at different groups (e.g., difference in clothing for teens versus professionals who work in an office). Then guide students in identifying the most likely segment for their product idea.

Have students create a written or visual target customer profile that brings this segment to life. Encourage them to include both demographic and psychographic details, so the profile feels like a real person. Have students explain their assumptions about why you think this person would be a likely customer for your product. Next, have them draft interview questions aimed at testing whether their assumptions about this target customer profile are accurate; for example, "Do you experience [problem/need/want]?" "What goods or services do you currently use to address this problem/need/want?"

Allow time for peer feedback on interview questions, emphasizing the skills learned from Unit 1 on the importance of open-ended, unbiased wording.

Assessments / Checks for Understanding

Review students' customer profiles and interview questions for clarity and alignment with the product idea. Ask probing questions, such as "Is this profile descriptive enough to be understood by someone outside your team?" or "Are your questions written in a way that avoid leading the customer toward a particular answer?"

Ask students to conduct at least one interview with someone who matches their target customer profile to test their hypothesis. Remind them to take careful notes or seek permission to record the interview. Students should be prepared to revise their customer profile if the interview suggests that their assumptions don't hold up.

Deliverable

By the end of this task, the deliverable is a target customer profile. Ensure that students document how hypothesis testing shaped a decision about their target customer.

UNIT 2 · TASK 2

Develop a plan to build customer relationships and develop a sales tactic drawing on principles of persuasion.

Driving Question

How can we design strategies that not only attract customers but also build lasting relationships with them?

Student Objectives

In this task, students explore how businesses move beyond identifying customers to winning their business and earning their loyalty. They develop hypotheses about which sales tactics, based on the principles of persuasion, might attract their target customers and which tactics (such as strong customer service and rewards programs) can incentivize long-term customer relationships. Students will see that attracting buyers is critical but it is just the beginning;

retaining them requires trust, consistent value, and ongoing engagement. Students test their assumptions using interviews, focus groups, or A/B testing and refine their tactics based on feedback. Through this process, students:

- Interpret data (Skill 1.B)
- Test business hypotheses (Skill 2.B)
- Build customer relationships (LO 2.1.C)
- Explain consumer decision making (LO 2.2.A)
- Evaluate and apply sales tactics (LO 2.2.C)

Activities

Have students brainstorm possible tactics to persuade customers to buy their product, drawing on Cialdini's principles of persuasion. Then introduce the concept of customer relationships, explaining why repeat customers matter more than one-time buyers. Share an example of a business that uses loyalty programs, personalized service, or strong branding to retain customers. Have students brainstorm tactics they can use to retain their customers and increase customer lifetime value.

Guide students to frame their customer-acquisition and customer-retention tactics as hypotheses: "If we offer X, then customers will respond by Y." Students can then design interviews, focus groups, or A/B tests to check whether their assumptions hold.

Assessments / Checks for Understanding

Review student hypotheses and tactics for clarity, feasibility, and connection to their target customer profile. During class, circulate to observe whether students are designing unbiased questions and thinking critically about customer feedback.

Optional Extension Activity

Ask students to test one of their customer relationship hypotheses outside class. They should document customer responses and reflect on what worked and what needs iteration.

Deliverable

By the end of this task, the deliverable is the plan to build customer relationships, including the sales tactic(s) that initially attract them.

UNIT 2 · TASK 3

Conduct primary-source market research to test a hypothesis related to customers' preferences.

Driving Question

How can we learn what product features our target customers want?

Student Objectives

In this task, students take the next step in understanding their market: exploring what their target customers want. They begin by forming a hypothesis about which features, such as attributes, functionality, or user experience, would make their product useful and appealing to their target customers. Students then design and conduct primary-source research through interviews with potential customers, aiming to test and refine their assumptions about preferences. The emphasis is on using authentic communication to elicit candid, useful feedback.

Along the way, students:

- Test business hypotheses (Skill 2.B)
- Create professional interview protocols (Skill 4.B)
- Develop clear objectives related to a research task, if working in teams (Skill 5.A)
- Explain why and how marketers collect data (LO 2.1.A)
- Explain the role of market research in business decision making (LO 2.3.A)
- Conduct and interpret their own primary-source research (LO 2.3.C)

Activities

Begin class with a brief example of how businesses test product features with customers, such as how fast-food chains pilot new menu items or tech companies beta-test apps.

Guide students in developing a hypothesis about customer preferences for their product; for example, "If customers value convenience, then offering a mobile app interface will increase their interest in the product."

Next, ask students to design interview questions that directly test this hypothesis; ensure the questions are open ended and unbiased. Provide practice time for mock interviews in pairs before sending students into real interviews. At least one real customer interview should be conducted outside of class, with an individual who matches their identified target customer profile. Students should record findings carefully and be prepared to compare their results with their initial hypothesis.

Assessments / Checks for Understanding

Check students' hypotheses for clarity and testability. Review their interview protocols to confirm that questions are unbiased and likely to generate useful insights. During practice interviews, observe whether students listen actively and capture notes accurately.

Optional Extension Activity

Have students interview one person outside their target segment (someone who doesn't fit their target customer profile) and compare insights with their original customer interview.

Deliverable

By the end of this task, the deliverable is the research findings on customer preferences. Ensure that students document how hypothesis testing shaped a decision in response to customer preferences.

UNIT 2 · TASK 4

Conduct secondary-source market research to assess the competitive landscape and develop a data visualization that reflects research findings.

Driving Question

What can we learn from existing data about the competitors and overall market we plan to enter?

Student Objectives

In this task, students shift from interviewing individuals to consulting published data and research to better understand the competitive landscape. They investigate the number of potential customers, identify competitors, analyze

strengths and weaknesses, and uncover opportunities or challenges. Students then create a data visualization (e.g., a bar chart, stacked bar chart, line graph, or pie chart) to communicate their findings. Along the way, students strengthen their ability to:

- Interpret business data (Skill 1.B)
- Analyze external factors that affect a business (Skill 3.A)
- Develop clear, shared team objectives, if working in teams (Skill 5.A)
- Explain the purpose of market research (LO 2.3.A)
- Conduct and interpret secondary-source research (LO 2.3.B)
- Develop data visualizations (LO 2.3.D)

Activities

Begin by discussing secondary sources of market research, such as government reports, trade associations, or business publications. Share examples of data visualizations that effectively communicate market research.

Have students search for information about their product's market and competitors. If possible, collaborate with a librarian to teach research strategies. Students then compile their findings.

Review basic types of data visualizations with students, including bar charts, stacked bar charts, line graphs, and pie charts. Have students prepare a data visualization that communicates a key finding from either primary-source or secondary-source research.

Assessments / Checks for Understanding

Check that student sources are credible and properly cited. Review data visualizations for clarity, accuracy, and alignment with research findings.

Optional Extension Activity

Ask students to refine their visualization and complete a short, written summary explaining what the data shows about their market and competitors.

Deliverables

By the end of this task, the deliverables are the market research findings on competitive landscape and a data visualization.

UNIT 2 · TASK 5

Develop a minimum viable product (MVP) to assess product-market fit and branding/brand identity.

Driving Question

How can we create and test a version of our product that demonstrates value to customers and communicates our brand?

Student Objectives

Now students begin to bring their product to life. In this task, they design a minimum viable product (MVP)—a simple version of their product that allows them to test whether customers see value in it. They also craft a value proposition that explains who the product serves, what problem it addresses, and why it is better than alternatives. Finally, students connect their MVP and value proposition to their earlier mission and vision statements by developing branding elements, such as a logo, slogan, or design style. Through this task, students:

- Test hypotheses (Skill 2.B)

- Create authentic business communications (Skill 4.B)
- Follow through on agreed-upon deliverables, if working in teams (Skill 5.D)
- Develop an MVP and value proposition (LO 2.4.A)
- Develop and evaluate branding (LO 2.4.B)

Activities

Introduce the concept of an MVP using familiar examples (e.g., an early prototype of a popular app). Have students create a basic version of their product; they can draw their MVP, craft or build it with available materials, create a virtual representation of it, or make a video that describes its functionality.

Guide them to draft a clear value proposition that briefly describes their product and answers four questions:

1. Who are they (company or student's name)?
2. Who is the product for?
3. What problem does it solve?
4. Why is it better than other competitive options?

Finally, lead students in creating simple branding elements to support their MVP and value proposition.

Assessments / Checks for Understanding

Review MVP sketches and value propositions for clarity and alignment with customer needs. Evaluate whether branding elements reflect the mission, vision, and value proposition.

Have students test their MVP and brand identity with target customers through interviews, focus groups, or A/B testing. They should document findings and plan revisions.

Deliverables

By the end of this task, the deliverables are the minimum viable product (MVP), an assessment of product-market fit, and a brand identity. Ensure that students document how they used hypothesis testing to assess product-market fit using their MVP, and document how hypothesis testing influenced a branding decision.

UNIT 2 · TASK 6:

Develop a pricing strategy.

Driving Question

What price will both attract customers and support our business goals?

Student Objectives

In this task, students learn that pricing is not just about covering costs; it's also about positioning a product in the market. Students experiment with different pricing strategies—competitive, penetration, cost-based, or value-based—and test them with customers. They see that price influences both profitability and customer perception. Through this task, students:

- Test hypotheses (Skill 2.B)
- Use decision-making criteria to evaluate different options (Skills 3.B and 3.C)
- Develop and evaluate pricing strategy (LO 2.5.A)
- Evaluate how market conditions affect pricing power (LO 2.5.B)

Activities

Introduce typical pricing strategies with simple examples students know (e.g., fast food value menus versus premium coffee menus). Ask students to describe how they could use each pricing strategy for their product and how it would impact their product's price, their product's appeal to customers, and their product's position in the market. Then ask them to select one pricing strategy for further research, and guide them to develop a hypothesis, such as "If our product is priced at X, customers will respond by Y."

Have students design surveys or interview questions to test customer responses to different price points.

Assessments / Checks for Understanding

Review student hypotheses and pricing strategies. During class, listen for evidence that students understand both customer willingness to pay and the need for profitability.

Optional Extension Activity

Ask students to test their proposed prices with real or simulated customers, using surveys, mock sales, or pre-orders, and report back on their findings.

Deliverable

By the end of this task, the deliverable is the pricing strategy and initial product price. Ensure that students document how hypothesis testing shaped a pricing decision.

UNIT 2 · TASK 7

Select a potential marketing channel or channels.

Driving Question

What is the best way to deliver our product to customers?

Student Objectives

In this task, students turn to distribution, exploring how their product will reach the customer. They research and evaluate different marketing channels (e.g., direct sales, online platforms, retail stores) and select the one that best fits their product, customers, and resources. This work develops students' ability to:

- Explain options, establish criteria, and recommend a final course of action (Skills 3.B–3.D)
- Describe the types of marketing channels available to their businesses (LO 2.6.A)
- Select and evaluate potential marketing channels for their product (LO 2.6.B)

Activities

Introduce students to different types of marketing channels with examples they know (e.g., a local farmers' market stall, an Etsy shop, Instagram, or a retail partnership). Consider referring to the AP-provided Hestia Construction business case and the founder's considerations on the pros and cons of digital marketing.

Have students brainstorm possible channels for their product, then research feasibility and evaluate which aligns best with their resources and target customers and plan to achieve competitive advantage.

Assessments / Checks for Understanding

Check that students can explain why they selected one channel over others, citing evidence such as customer habits, costs, access, or reach.

Optional Extension Activity

Have students prepare a written rationale that incorporates evidence collected through market research to explain why their chosen channel(s) were selected.

Deliverable

By the end of this task, the deliverable is the selected marketing channel.

UNIT 2 · TASK 8

Develop a marketing campaign, including digital marketing tools.

Driving Question

How can we create promotional materials that communicate our product's value and reach our target customers?

Student Objectives

In this task, students pull together their research and branding work into a marketing campaign. They create authentic promotional materials, such as brochures, press releases, sales pitches, or social media pages, that showcase their product's value proposition and branding. They then form a hypothesis about the effectiveness of these materials and test it with their target customers, using the results to iterate and improve. This work strengthens students' ability to:

- Create authentic business communications (Skill 4.B)
- Follow through on agreed-upon deliverables, if working in teams (Skill 5.D)
- Develop or evaluate a marketing campaign (LO 2.7.A)
- Explain how digital tools have changed marketing (LO 2.7.B)

Activities

Provide examples of promotional materials—both digital and print—that clearly communicate a product's value proposition. Have students design their own materials, incorporating their logo, branding, and messaging.

Students will need to test at least one hypothesis specific to a digital marketing tool. Guide them to write a hypothesis such as "If we present our product using this campaign, 1 in 10 of our customers will place an order." Then allow them to test their hypotheses with peers or actual customers.

Assessments / Checks for Understanding

Review student promotional materials for clarity, design consistency, and alignment with the value proposition. During testing, ask whether customers can easily articulate what the product is, who it is for, and why it matters to them.

Ask students to revise their promotional materials based on customer feedback and prepare them for inclusion in a larger pitch or portfolio.

Deliverable

By the end of this task, the deliverable is the marketing campaign, including digital marketing tool(s). Ensure that students document how hypothesis testing shaped a decision related to a digital marketing tool.

Unit 3

Suggested completion milestone: ~Week 22 of the course

Unit 3 Deliverables:

- **Finance/Accounting** – Startup costs (Topic 3.4)
- **Finance/Accounting** – Potential source(s) of financial capital (Topic 3.5)
- **Finance/Accounting** – Revenue projection (Topic 3.6)
- **Appendix** – Pitch (Topic 3.5)
- **Appendix** – Actual or projected income statement (Topic 3.6)

Suggested Tasks

UNIT 3 · TASK 1

Determine startup costs and initial expenses associated with launching a new business/product.

Driving Question

What expenses must be considered when launching a new business, and how do these costs affect the feasibility of the business idea?

Student Objectives

In this task, students learn that businesses incur both one-time and recurring costs before generating revenue. They categorize startup costs as one-time expenditures or recurring expenses that may be fixed or variable, direct or indirect. By working through real examples, students:

- Interpret financial data (Skill 1.B)
- Assess the feasibility of their product (Skill 2.C)
- Present clear financial statements (Skill 4.A)
- Determine startup costs (LO 3.4.A)
- Describe operating expenses (LO 3.4.B)

Activities

Have students brainstorm and list the costs associated with launching their business idea, broken down according to whether they are one-time or recurring, fixed or variable, and direct or indirect. Encourage students to include costs they might not immediately think of, such as insurance, storage, and employee wages. Guide the discussion by introducing sample costs, such as rent for a workspace, equipment purchases, and utilities. A guest speaker, such as a local entrepreneur, could share real-world insight into how they managed their initial costs.

Assessments / Checks for Understanding

Review each student's categorized list of startup costs with totals. During class, check whether students correctly distinguish between one-time and recurring costs, fixed and variable costs, and direct and indirect costs.

Optional Extension Activity
Have students refine their list of startup costs by researching realistic price estimates for at least three major expenses and revising their totals accordingly.

Deliverable
By the end of this task, the deliverable is a list of the business startup costs supported by initial expenses.

UNIT 3 · TASK 2
Determine potential source(s) of financial capital.

Driving Question
What sources of funding are available to help new businesses get started?

Student Objectives
Students recognize that many entrepreneurs cannot fund a business alone and must seek external sources of financial capital. In this task, students explore funding options ranging from friends and family to angel investors, bank loans, competitions, incubators, and crowdfunding. (Note: angel investors, competitions, incubators, and crowdfunding are not assessable course content.) Students will:

- Assess desirability, viability, and feasibility of their product idea (Skill 2.C)
- Explain how funding sources address business needs (Skill 3.B)
- Explain why businesses seek external financial capital (LO 3.5.A)
- Determine potential sources of financial capital (LO 3.5.B)

Activities
Have students research funding sources appropriate for their business idea and local community. Consider highlighting specific opportunities, such as local business competitions or incubators, and discuss examples of crowdfunding campaigns. Ask students to make list of funding sources with explanations of why each could be relevant for their venture.

Assessments / Checks for Understanding
When reviewing students' lists of sources, check that they differentiate between personal, institutional, and community-based funding options and between debt and equity funding options or between borrowing and taking on investors.

Optional Extension Activity
Ask students to select two funding sources and write a brief comparison explaining the costs and benefits of each.

Deliverable
By the end of this task, the deliverable is a description of the potential source(s) of funding.

UNIT 3 · TASK 3
Develop a pitch to prospective lenders or investors.

Driving Question
How can entrepreneurs communicate the desirability, feasibility, and viability of their business idea to potential investors?

Student Objectives

Students develop an elevator pitch that combines persuasive communication with justification in this task. They learn that a compelling pitch must grab attention, describe the product and target customer, explain the problem, need, or want the product is intended to address, and explain how or why the product creates value for customers. There is a Sample Business Pitch Handout available at the end of this guide, which can be used for guidance and modeling. This activity develops students' ability to:

- Explain the feasibility of a product idea (Skill 2.C)
- Present data (Skill 4.A)
- Create authentic business communications (Skill 4.B)
- Develop and evaluate a pitch (LO 3.5.D)

Activities

Ask students to draft a ~150-200-word pitch that includes:

- A brief description of your product
- Your target customer profile
- The problem, need, or want your product is intended to address
- How or why your product creates value for customers

Offer time for practice in delivering the pitch aloud and encourage peer feedback. If students are in a team, they either all participate in the pitch with carefully practiced, assigned roles or they each should be prepared to deliver the entire pitch.

Assessments / Checks for Understanding

As students present their pitches to the class or small groups, add to the feedback they are receiving from their peers on the clarity, persuasiveness, and thoroughness of their delivery.

Optional Extension Activity

Have students revise their pitch, tightening their wording and practicing delivery so they can present confidently in one minute.

Deliverable

By the end of this task, the deliverable is a draft of the ~150-200-word pitch.

UNIT 3 · TASK 4

Develop an actual or projected income statement for a business, including a revenue projection.

Driving Question

How can businesses predict their financial performance in the first year of operations?

Student Objectives

In this task, students learn how to forecast sales volume, revenue, and expenses to understand whether their business can be profitable. They practice generating a revenue projection using price and estimated sales volume and then build an income statement that summarizes revenues and expenses. This work sharpens students' ability to:

- Evaluate viability (Skill 2.C)
- Present financial data clearly and accurately (Skill 4.A)
- Determine and describe the components of an income statement (LO 3.6.A)
- Develop an income statement or projected income statement for a business (LO 3.6.D)

Activities

Have students calculate anticipated revenue using their product's price and expected sales volume. Refer to Unit 2 – Task 6, where students tested pricing strategies, and explain how they can use the previous information they calculated and researched to make a reasonable sales prediction, using market size, research on customer demand, and existing sales if any. Then ask them to construct a projected income statement with quarterly breakdowns that include revenue, cost of goods sold (or cost of sales), gross profit, operating expenses, and pretax income. You may wish to show examples from real business startups to show realistic projections. Students should provide support for their projections.

Assessments / Checks for Understanding

Review students drafts of projected income statements. Look for correct use of categories and accurate calculations of profit.

Optional Extension Activity

Ask students to extend their income statement projections to years 2 and 3, clearly stating assumptions about growth, competition, and costs.

Deliverables

By the end of this task, the deliverables are the revenue projection and actual or projected income statement.

Unit 4

Suggested completion milestone: ~Week 28 of the course

Unit 4 Deliverables:

- **Customer** – KPI(s) for customer-related goal(s) (Topic 4.2)
- **Organization** – Skills assessment (Topic 4.1)
- **Organization** – Strategic decision using PACED model (Topic 4.3)
- **Operations** – KPI(s) for operations-related goal(s) (Topic 4.2)
- **Market** – KPI(s) for market-related goal(s) (Topic 4.2)
- **Market** – Framework analysis of market using Porter's Five Forces and/or SWOT analysis (Topic 4.4)
- **Finance/Accounting** – KPI(s) for finance-related goal(s) (Topic 4.2)
- Final business canvas and appendix

Suggested Tasks

UNIT 4 · TASK 1

Identify skills and core competencies.

Driving Question

What skills and core competencies are needed to launch and run a successful business, and how can entrepreneurs acquire them?

Student Objectives

In this task, students explore both the hard and soft skills essential to entrepreneurship. They complete a skills self-assessment and identify which competencies they currently possess, which can be acquired, and which may need to be outsourced for their business idea. By doing so, students:

- Interpret data (Skill 1.B)
- Align personal capabilities with financial and strategic goals (Skill 1.C)
- Define clear roles, if working in teams (Skill 5.B)
- Identify and demonstrate effective leadership and business communication skills (LO 4.1.B)
- Explain why businesses need a variety of employee competencies (LO 4.1.C)

Activities

Guide students to take an online skills assessment and record their results. They should share their findings with their team or with a partner and discuss the strengths and, if they are comfortable, any weaknesses they've discovered. If working in teams, have students discuss how their combined skills could support their team's business and identify any gaps. Remind students how skill development connects to future courses and career pathways. Finally, ask students to write a summary identifying their strongest skills, areas for growth, and skills critical for the success of their business.

Assessments / Checks for Understanding

Review students' summaries and confirm that their description of required skills aligns to their business idea.

Optional Extension Activity

Ask students to research one core competency necessary to the viability of their business idea that they do not currently possess, and write a brief plan for how they could acquire it through training, education, or outsourcing.

Deliverable

By the end of this task, the deliverable is the individual skills assessment.

UNIT 4 · TASK 2

Identify KPIs and benchmarks related to customer-related goals, market-related goals, operations-related goals, and finance-related goals.

Driving Question

How do businesses measure progress toward goals, and why are KPIs and benchmarks important?

Student Objectives

Students learn that measurable indicators allow businesses to track performance and make evidence-based decisions in this task. They identify at least four KPIs linked to components of the business canvas: customer, market, operations, and finance/accounting. They then compare their KPIs against appropriate benchmarks to evaluate whether their targets are realistic. Through this work, students:

- Interpret data (Skill 1.B)
- Present results clearly (Skill 4.A)
- Follow through on deliverables, if part of a team (Skill 5.D)
- Develop and interpret KPIs (LO 4.2.B)
- Explain how benchmarks are used (LO 4.2.C)

Activities

Begin by posing the driving question to introduce the concepts of KPIs and benchmarks. Frame them as the scoreboards businesses use to track whether their strategies are working. Be sure students understand that:

- KPIs are specific, measurable indicators tied to business goals (e.g., number of new customers, average delivery time, profit margin).
- Benchmarks are standards of comparison (e.g., industry averages, competitor performance, or historical data) that show whether a KPI target is realistic.

Model the process for students. Choose a familiar business example (e.g., a coffee shop, gym, or streaming service), and work through the following steps live, using a simple chart or whiteboard and simple examples:

1. Identify goal areas – Identify customer, market, operations, and finance/accounting goals.

2. Generate KPIs – For each goal area, define a measurable indicator:
    - Customer: Number of new customers per month
    - Market: Percentage of total market share
    - Operations: Average wait time per order
    - Finance/Accounting: Per-unit profit margin

Emphasize that KPIs must be objective, measurable categories such as "return on investment" rather than "higher return on investment." The value judgment comes later when comparing to benchmarks. To aid student understanding, relate KPIs to student grades and GPAs. For example, a GPA is a KPI for student academic performance, and the benchmark might be the school's average GPA.

Have students now apply the process to their own businesses. They should:

- Identify four KPIs (one each for customer, market, operations, finance.
- Ensure each KPI is specific, measurable, and actionable. It's important to avoid vague KPIs like "better marketing" or "increase sales." Students should use measurable KPIs like "Instagram followers gained per month" or "product cost per unit."
- Locate or infer benchmarks (class-provided samples, online searches, peer comparisons).
- Record KPIs and benchmarks on a chart.

Reinforce that KPIs are not just numbers, they are tools for decision making. Benchmarks prevent setting goals that are either too easy or impossible.

When they're ready, have students present their KPIs to the class for peer feedback. Prompt students to ask the presenters questions like "How will you measure that?" or "Why is this target realistic?" This pushes students to justify their choices. Follow up by asking, "If this KPI is not met, what decision would you make about your business model.

To wrap up, considering having students reflect briefly on the following questions and then share their responses with the class: "Which of my KPIs will be hardest to meet, and why? What benchmark guided my thinking?"

Assessments / Checks for Understanding

As students present their KPIs and benchmarks to the class, listen for evidence that each KPI is measurable, aligned with business goals, and is realistic and relevant.

Optional Extension Activity

Have students track one KPI for a week (real or simulated data) and write a short reflection on how monitoring performance can inform decision making.

Deliverable

By the end of this task, the deliverables are KPIs for customer-related goals, market-related goals, operations-related goals, and finance-related goals for the business.

UNIT 4 · TASK 3

Make a strategic decision to address a problem or opportunity using the PACED model.

Driving Question

How can businesses use a structured decision-making model to address opportunities and challenges?

Student Objectives

In this task, students apply the PACED model (problem, alternatives, criteria, evaluation, decision) to make a strategic decision for their business. They learn how to identify an issue, gather evidence, and evaluate alternatives systematically. In doing this, students:

- Describe factors that create opportunities or problems (Skill 3.A)
- Explain how actions can capitalize on opportunities or address problems (Skill 3.B)
- Establish decision-making criteria (Skill 3.C)
- Make evidence-based recommendations (Skill 3.D)
- Apply a deliberative process to make a business decision (LO 4.3.B)

Activities

Introduce the PACED model as a structured process for making thoughtful business decisions. Provide students with the PACED Decision-Making Handout from the back of this guide, and display a simple chart that highlights each step.

P – Problem: Define the issue.

A – Alternatives: Identify possible choices.

C – Criteria: Set standards for comparing the choices.

E – Evaluation: Weigh each choice against the criteria using evidence.

D – Decision: Recommend an option and support the recommendation with reasoning and evidence.

Frame PACED as a way of slowing down and making evidence-based choices, rather than rushing to a gut instinct answer. Use accessible language: PACED is a toolbox to help students make tough calls.

Present a business situation involving a problem or opportunity and work through the PACED handout on the board or projector with guiding questions. Maintain student focus on the process—it's not about getting the right answer.

- Problem: What is the issue? (For example: whether to expand to a new neighborhood)
- Alternatives: What are the options? (For example: expand, stay put, try delivery instead)
- Criteria: How will we compare these choices? (For example: return on investment, impact on delivery costs, impact on customer demand)
  - **NOTE:** Clarify that criteria must be neutral measures. Avoid letting students phrase criteria as comparisons ("higher ROI," "lower cost.") The evaluation step is where judgments are made.
- Evaluation: How does each option perform on each criterion? What evidence supports this?
- Decision: Which option looks best overall, and why? What evidence supports this option? What trade-offs can we accept?

When you feel students are ready, ask them to apply the PACED model to their own business ideas. Students choose a real decision point for their business (e.g., "Which marketing channel should we prioritize?") and identify alternatives, set criteria, and evaluate based on research or reasoning.

In the next class period, plan to have students post their PACED Decision-Making Handout on the walls and leave peer feedback for one another with sticky notes.

Assessments / Checks for Understanding

Review students' completed handouts and look for clear problem definition, realistic alternatives, criteria-based evaluation, and evidence-based decision.

Optional Extension Activity

Ask students to write a short 2–3 sentence justification explaining why their team's final decision was the best option, supported by evidence.

Deliverable

By the end of this task, the deliverable is a strategic decision using the PACED model aligned with previously created canvas deliverables.

UNIT 4 · TASK 4

Use strategic frameworks—Porter's Five Forces and SWOT analysis—to evaluate the competitive landscape and the business's internal capabilities.

Driving Question

How can businesses evaluate the competitive landscape and their own strengths and weaknesses?

Student Objectives

In this task, students apply Porter's Five Forces and SWOT analysis frameworks to assess their business's position in the market. By analyzing rivals, substitutes, customers, and suppliers, they gain a realistic view of external pressures. They then evaluate internal strengths and weaknesses alongside opportunities and threats. This helps students to:

- Explain the feasibility and competitive positioning of their business (Skill 2.C)
- Describe internal, market, and external factors that affect a business or individual, and explain how and why they create opportunities and/or problems (Skill 3.A)
- Apply Porter's Five Forces (LO 4.4.B)
- Apply SWOT analysis (LO 4.4.D)

Activities

Introduce Porter's Five Forces and SWOT analysis, pointing students to the Market Competitiveness Handout at the end of this guide (p. 186). Use visuals or a simple chart to highlight each element (e.g., bargaining power of suppliers, threats of substitutes, strengths versus weaknesses), and ensure you're keeping the language accessible; frame these as specific points of view students can use to examine a business.

Model the process for students based on one familiar business (e.g., a national brand, company, or local business your students would be familiar with) and walk the class through Porter's Five Forces with guiding questions for each element:

- Who are the competitors?
- How easy is it for new businesses to enter this market?
- What alternatives could customers choose instead?

Then walk students through the SWOT matrix and explain what constitutes a strength, weakness, opportunity, or threat. Point out key differences between internal and external factors, and explain how a business's strengths and

weaknesses influence its ability to respond to opportunities and threats. Complete a SWOT matrix together for the target business, based on what students know about its market and operations.

Have students use the Market Competitiveness Handout, in the Appendix of this guide, to conduct both a Porter's Five Forces analysis and a SWOT analysis of their business idea and its competitive landscape. Restricting their research can aid some students in remaining focused and not falling into a research spiral. Give them 20–25 minutes to evaluate their market using the following:

- Online customer reviews, pricing comparisons, or industry reports
- Social media to see customer sentiment
- Personal experiences and those of their peers or family members

Then have them revisit their business canvases (especially the Value Proposition and Target Customer Profile sections) to draw correlations and record key insights from items in their market analysis to relevant parts of the canvas. For example:

- Opportunity: Unmet demand for eco-friendly packaging → I (we) can add value by using sustainable materials *[Value proposition]*.
- Threat: Many low-cost competitors → I (we) need to target premium buyers who value quality *[Target customer profile]*.

Consider closing the activity with a gallery walk for peer review, where students post their SWOT matrixes and business canvases, and peers leave sticky notes with questions or suggestions to inform revision for their final deliverables.

Assessments / Checks for Understanding

When reviewing students' submitted Porter's Five Forces chart and SWOT matrix along with their updated business canvas, assess whether they show clear reasoning and accurate use of the frameworks.

Optional Extension Activity

Have students revise their SWOT analysis after peer feedback, focusing on how their internal strengths and weaknesses align with external opportunities and threats.

Deliverables

By the end of this task, the deliverables are the framework analysis of a market using Porter's Five Forces and/or SWOT analysis along with an updated business canvas.

UNIT 4 · TASK 5

Prepare the final business canvas and appendix.

Driving Question

How can entrepreneurs consolidate their work into a final business canvas that demonstrates feasibility and learning?

Student Objectives

In this task, students review all project components to ensure their business canvas and appendix represent their best thinking and evidence. They learn that a business's success is not measured solely by profitability but also by the business's ability to assess desirability, viability, and feasibility. This task strengthens their ability to:

- Explain viability (Skill 2.C)
- Present financial and strategic data clearly (Skill 4.A)
- Create professional business communications (Skill 4.B)
- Complete agreed-upon deliverables, if working in teams (Skill 5.D)
- Apply design thinking to validate ideas (LO 1.4.C)
- Develop and evaluate a pitch (LO 3.5.D)

Activities

Have students revise their business canvas, integrate supporting documents into the appendix, and prepare for classroom submission. Consider facilitating a reflection activity where students share lessons learned about entrepreneurship, risks, and the importance of hypothesis testing.

Assessments / Checks for Understanding

Check for completeness, evidence-based reasoning, and professionalism in students' final canvas and appendix. A rubric is provided on p. 182.

Optional Extension Activity

Ask students to write a 3–5 sentence reflection on what they learned about entrepreneurship, including new skills developed, challenges faced, and future opportunities.

Deliverables

By the end of this task, the deliverables are the final business canvas and appendix, which should be submitted for teacher scoring and inclusion in course grades (a blank business canvas template is available on p. 148 of this guide and on AP Classroom).

Frequently Asked Questions

1. **Do students have to launch a business to be successful in AP Business with Personal Finance?**
   No, students are not required to launch a business. The project is centered on the entrepreneurial journey, including hypothesis testing and ideation. Students will be most successful if they focus on learning from the process and reflecting on their work at each stage.
2. **What will students be assessed on?**
   Individual AP teachers collect and score their students' Business Canvas Projects and incorporate those scores into students' course grades. A rubric that can be used for this purpose is provided on p. 182.

   Students will also be assessed on their Business Canvas Project through the Business Canvas Project Exam-Day Validation FRQ on the AP Business with Personal Finance Exam. For additional information about the AP Exam, including a sample Business Canvas Project Exam-Day Validation FRQ and accompanying scoring guidelines, please refer to the Exam Information section that begins on p. 237.
3. **What should I do if students have trouble identifying a customer problem, need, or want to work on?**
   Some students may struggle with this stage in the process. Possible solutions include teaming up with a student or students who have an idea and need help or leading a class ideation activity to identify a wide variety of potential business ideas. Students are also permitted to use AI as an idea generator.
4. **What if students have a product idea but no identified customer problem or need?**
   Many students will have an idea of a specific business or product, like a lawn-mowing business or app. They should focus their early efforts on finding potential customers and eliciting candid feedback to validate whether the product is something people need and would pay for.
5. **What if students changed their minds about the problem or their solution in the middle of the course?**
   Students may change their project at any time; however, they will need to repeat earlier components of the project for the new business idea. For this reason, it is suggested that students commit to their idea at the end of Unit 1, but this is not a hard deadline. It is advised that students not change their business idea once they have begun Unit 3.
6. **What if students have an idea about a problem, need, or want but have trouble designing a solution?**
   The first step is to identify through customer interviews what kind of solution would address the problem, need, or want. Is it a physical product? A virtual product? An app? A service? From there, students can start ideating the product features and the supply chain.

7. **Are there guidelines on what kinds of products students can develop?**
   For the Business Canvas Project, the student product must be legal and safe for use by teenagers. Many high school business competitions have further restrictions (e.g., no food products) so students should consult competition guidelines if they are planning to submit their business idea to a competition. Students may develop either goods or services.
8. **Do students have to work in teams?**
   No. Working in teams is optional. Students may work alone or in a team of up to three. Due to the nature and length of this project, student teams will require a more formal structure than what they—and you—may be used to. This includes setting standards for individual contributions to help prevent conflicts from arising, like assigning specific roles or setting out ground rules for behavior, attendance, and contributions. For example, groups might decide who is responsible for researching specific topics or agree that everyone must speak during presentations. The collaboration skills contained in Skill Category 5 may be a useful reference as teams develop standards and norms.
9. **What if students have conflicts with their team members that cannot be resolved?**
   Team conflicts are a natural part of the collaborative process. Students should anticipate challenges, discuss team norms, and agree to roles and responsibilities before beginning to work together on a team. If a conflict proves irreconcilable, students may split up, with each team member continuing to pursue the same business idea independently. Students should be advised before agreeing to work on a team that no single team member owns the team's idea or any intellectual property developed by the team.
10. **What are the acceptable uses of AI on the project?**
    Consult the AP Program's latest guidance on the appropriate use of artificial intelligence tools and related services, available on **AP Central**.
11. **Can students use their project for CTSO or other competitions?**
    Yes, this is recommended and encouraged; depending on when this project is facilitated, use of the project or project components can provide support for, or contributions to CTSO events within BPA, DECA, and FBLA. Other applications are at your discretion.

SUPPORTIVE PROJECT GUIDE FOR TEACHERS

ACTIONS THAT HELP:

- Encouraging students to develop a good or service they can deliver with available resources
- Providing students with class time to work on the project
- Providing students with feedback about their progress on the project
- Asking students questions to promote deeper understanding and reflection on the process
- Inviting local entrepreneurs or small business advisors (including those working in the financial services industry) as guest lecturers (if permitted)
- Challenging students to test their assumptions for accuracy
- Teaching students how to use the provided rubric to self-assess and peer assess the components of their business canvas

ACTIONS THAT HINDER:

- Discouraging students from local service ideas, such as dog walking or lawn mowing
- Telling students what kind of business to start
- Editing or revise student work
- Telling students that their business idea will not work
- Allowing students to work in groups larger than three

Business Canvas Project Rubric

Rubric Row	Scoring Category	Skills	Scoring Criteria
A	Customer Component	2.A	Students must complete the Customer Component of their Business Canvas, which includes the following elements: • Identification and validation of customer problem, need, or want • Target customer profile • Plan to build customer relationships, including sales tactic(s) • Market research findings on customer preferences • Marketing campaign, including digital marketing tool(s) • KPI(s) for customer-related goals
B	Hypothesis Testing of Customer Component Elements	2.B	Students must complete hypothesis testing to validate each of the following: the customer problem, need, or want, the target customer profile, customer preferences, a digital marketing tool Each description of hypothesis testing must include: • The hypothesis that was tested • The primary- and/or or secondary-source research method(s) • The evidence collected • How the evidence shaped decision making
C	Product Component	2.A 2.C	Students must complete the Product Component of their Business Canvas, which includes the following elements: • Minimum viable product (MVP) used to assess product-market fit • Value proposition • Branding/brand identity
D	Hypothesis Testing of Product Component Elements	2.B	Students must complete hypothesis testing to validate problem-solution fit, product-market fit using an MVP, and the effectiveness of branding. Each description of hypothesis testing must include: • The hypothesis that was tested • The primary- and/or or secondary-source research method(s) • The evidence collected • How the evidence shaped decision making
E	Market Component	1.B 2.A 2.C	Students must complete the Market Component of their Business Canvas, which includes the following elements: • PESTEL analysis • Plan to seek competitive advantage • Research findings on competitive landscape • KPI(s) for market-related goals • Framework analysis of market using Porter's Five Forces and/or SWOT analysis
F	Organization Component	2.C 3.A 3.B 3.C 3.D 5.A 5.B 5.C 5.D	Students must complete the Organization Component of their Business Canvas, which includes the following elements: • Vision statement • Mission statement • Skills assessment • Strategic decision using PACED model

Rubric Row	Scoring Category	Skills	Scoring Criteria
G	Operations Component	2.A 2.C	Students must complete the Operations Component of their Business Canvas, which includes the following elements: • Supply chain plan, including process(es) for producing the good or service • Marketing channel(s) • KPI(s) for operations-related goal(s)
H	Finance/ Accounting Component	1.B 2.C 4.A	Students must complete the Finance/Accounting Component of their Business Canvas, which includes the following elements: • Price and pricing strategy • Startup costs • Potential source(s) of financial capital • Revenue projection • KPI(s) for finance-related goals
I	Hypothesis Testing of Pricing Strategy	2.B 2.C	Students must complete hypothesis testing to validate the pricing strategy. The description of hypothesis testing must include: • The hypothesis that was tested • The primary- and/or or secondary-source research method(s) • The evidence collected • How the evidence shaped decision making
J	Data Visualization	1.B 2.C 4.A	Students must create a data visualization that reflects primary- or secondary-source market research findings about customer preferences and/ or the market landscape. The data visualization may be a bar chart, stacked bar chart, line graph, or pie chart, or a combination of these.
K	Pitch, Written	2.A 2.C 4.B	Students must complete a written pitch, which includes the following elements: • A brief description of your product • Your target customer profile • The problem, need, or want your product is intended to address • How or why your product creates value for customers
L	Pitch, Presentation to Audience	2.A 2.C 4.B	Optional: Students can deliver a 60-second oral pitch to an audience that includes an attention-getting introduction as well as the written pitch required elements.
M	Actual or projected income statement	1.B 2.C 4.A	Students must complete an actual or projected income statement, which includes the following elements: • Revenue based on product price and sales • Cost of goods sold (COGS) • Gross profit • Operating expenses • Pre-tax income

Supplemental Handouts

UNIT 3 · TASK 3

Sample Business Pitch Handout

High school cafeterias often leave students with few healthy snack choices between classes. Our business, Fuel Up! Snack Box, solves this problem by offering affordable, grab-and-go snack boxes filled with balanced options like fruit, protein bars, and water. When we talked with student athletes, eight out of ten told us they either skipped snacks or bought junk food because healthier alternatives were hard to find on campus.

Our value proposition is clear: Fuel Up! Snack Box delivers nutrition and convenience. Unlike vending machines that mainly stock chips and candy, our boxes are curated for energy and focus, designed to help student athletes who want to feel better and perform better in class and in sports.

We designed our model so that the cost to prepare each box stays well below the price students pay, even after we cover supplies, packaging, and school partnership fees. By sourcing ingredients in bulk and keeping our operations simple, we can maintain healthy profit margins while keeping prices student friendly. Demand for snacks is steady across the school week and can grow through clubs, teams, and events, which gives the business room to expand over time.

This pitch shows that Fuel Up! Snack Box meets a real need, provides a stronger option than current alternatives, and is built on a sustainable business model. It is good for students' health and a smart way to generate ongoing revenue for a student-run venture.

DECONSTRUCTION

1. **Attention Hook**
   - **Purpose:** Grab attention with a relatable problem.
   - **Example:** "High school cafeterias often leave students with few healthy snack choices between classes."
2. **Target Customer Profile**
   - **Purpose:** Identify potential customers
   - **Example:** "...designed to help student athletes who want to feel better and perform better in class and in sports."
3. **Problem Identified/Hypothesis Tested**
   - **Purpose:** Define and validate the customer problem.
   - **Example:** "8 out of 10 student athletes said they either skipped snacks or bought junk food because healthier alternatives weren't available."
4. **Value Creation**
   - **Purpose:** Explain how the good or service addresses the problem and creates value for customers.
   - **Example:** "Fuel Up! Snack Box delivers nutrition and convenience, unlike vending machines filled with candy."
5. **Closing**
   - **Purpose:** Summarize the impact and viability.
   - **Example:** "Fuel Up! Snack Box is a healthy, scalable solution that benefits students and investors alike."

UNIT 4 · TASK 3 | PACED Decision-Making Handout

STEP 1: DEFINE THE PROBLEM

What decision needs to be made?

STEP 2: LIST THE ALTERNATIVES

What are the possible courses of action?

Alternatives	Description
1:	
2:	
3:	

STEP 3: IDENTIFY THE CRITERIA

What factors are important in making the decision?

Criteria	Why It Matters
1:	
2:	
3:	

STEP 4: EVALUATE EACH ALTERNATIVE

Use the grid below to compare how well each alternative meets each criterion.

	Criterion 1	Criterion 2	Criterion 3	Notes/Evidence
Alternative 1				
Alternative 2				
Alternative 3				

STEP 5: DECIDE

Based on your evaluation, which option is the best choice, and what evidence and reasoning support this decision?

UNIT 4 · TASK 4 | Market Competitiveness Handout

PART 1: PORTER'S FIVE FORCES

Porter's Five Forces is a way to study the outside pressures on a business. Think of it as mapping the "battlefield" your business is stepping into. Businesses don't operate in vacuums. They face competition and must manage both opportunities and challenges. These tools, Porter's Five Forces and SWOT, help us see what's going on around a business and inside it.

The Five Forces

Competitive Rivalry: Who are your direct competitors, and how intense is the competition? Include the names and numbers of rivals if possible.

Threat of New Entrants: How easy is it for new businesses to enter the market? Are there barriers like cost, technology, or government rules?

Threat of Substitutes: What other kinds of products could customers use to address their problem, need, or want (to distinguish this from rivalry) instead of yours? (provide specific examples; name and provider.)

Power of Suppliers: How much control do resource suppliers have over prices or availability of materials you need?

Power of Buyers (Customers): How much influence do customers have over price and quality expectations?

Porter's Five Forces Template

Force	Specific Evidence
Competitive Rivalry	
Threat of New Entrants	
Threat of Substitutes	
Power of Suppliers	
Power of Buyers	

PART 2: SWOT ANALYSIS

SWOT (strengths, weaknesses, opportunities, threats) helps you connect what's happening inside your business with what's happening outside of the market.

The Four Quadrants

Strengths (internal): What do you do well? What skills do you have that contribute to your business's core competencies? (For example: good grades in math or business classes; existing followers on TikTok/Instagram who match your target customers.)

Weaknesses (internal): What are the characteristics of your business that would be disadvantaged? (For example: limited startup money to buy supplies or equipment; shyness or discomfort talking to strangers or selling face-to-face.)

Opportunities (external): What trends, gaps, or chances can you take advantage of? (For example: school or local events where lots of customers are in one place; local social media trends you could join or start like a popular challenge you can tie your product to.)

Threats (external): What risks or problems could hurt your success? (For example: a new or existing business selling a very similar product at a lower price or higher quality; school or local rules that restrict selling on campus or in certain areas.)

Strengths	**Opportunities**
Weaknesses	**Threats**

How They Connect

Five Forces shows you the pressures and dynamics in your market.

SWOT helps you respond strategically by seeing where your idea is strong, weak, or needs adjustment.

Used together you can adapt your Business Canvas Project to better fit reality.

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AP BUSINESS WITH
PERSONAL FINANCE



Financial Advisor Project Guide

Project at a Glance

Project Overview

This Financial Advisor Project Guide is an instructional resource for immersing students in the process of financial planning and decision making through authentic, scenario-based learning. Much like professional advisors, students examine their clients' household income and expenses, review debt and credit, decode pay stubs and taxes, assess insurance coverage, and evaluate savings and investment strategies, and connect these elements to the clients' short- and long-term goals. This guide is intended to be used in conjunction with the Guide to Teaching with Cases, the AP-provided business cases, the Business Canvas Project Guide, and the AP Business with Personal Finance Course Framework to ensure that students engage with the full range of course content. Together, these resources provide an integrated framework that connects business concepts, financial literacy, and applied problem-solving through a cohesive sequence of entrepreneurial, financial, and analytical experiences.

Rather than practicing isolated skills, this project encourages students to use their knowledge and skills to explain trade-offs, justify recommendations, and communicate advice persuasively. They also learn to defend their reasoning in real time, responding to client questions and challenges just as professional financial advisors would. Their work culminates in a household financial plan and client presentation that demonstrates reasoned decision making based on their financial literacy and the ability to apply it in a realistic scenario.

Project Goals

This project emphasizes the application of financial literacy to authentic decision-making contexts. By the end of the project students will:

- Strengthen mastery of financial literacy standards for income, spending, credit, taxes, risk management, saving, investing, and charitable giving
- Practice structured decision making by establishing decision-making criteria, weighing trade-offs, and evaluating options with consideration of client goals and values
- Develop analytical skills by interpreting financial data and using it to recommend a decisive course of action for an individual and support the recommendation with persuasive reasoning and evidence
- Learn how financial planning supports the ability to achieve long-term goals related to postsecondary education, housing, retirement, and charitable giving
- Build upon their established communication and collaboration skills by preparing and delivering professional presentations, providing and receiving peer feedback, and working in small groups
- Gain confidence in defending financial recommendations under questioning, demonstrating how reasoning and trade-offs matter as much as the final answer
- Understand how households can protect themselves from both physical and financial risks, including those related to fraud, scams, and predatory lending
- Connect classroom learning to their own financial futures, understanding how decisions about education, housing, investing, giving, and risk management shape long-term stability

Project Description

In this culminating financial advisor project for the AP Business with Personal Finance course, students step into the role of financial advisors to apply, synthesize, and communicate what they have learned about personal financial literacy.

Students work with a financial profile for a fictional but realistic client household, developing and revising a plan that evolves over time. Each of the four major tasks iteratively builds toward a client-ready financial plan, complete with supporting data, evidence-based recommendations, and visualizations that demonstrate both technical accuracy and client-centered communication.

The culminating task may take different forms: a simulated client meeting, a written report, an email or video consultation, or an in-class advising session with volunteers role-playing as the client household. In all cases, the emphasis is on reasoning, clarity, and communication, not on arriving at a predetermined right answer. A rubric to help guide teacher scoring of the Financial Advisor Project is provided on p. 234.

Process Overview

Help students understand that financial advising is not about finding the perfect solution or a predetermined answer. Their goal through this project is to apply principles thoughtfully, weigh the evidence against the needs of their clients, and communicate their plan clearly. By the time students reach the culminating event, they will have practiced not only the technical skills of financial literacy but also the professional skills of listening, explaining, and defending recommendations with confidence. Throughout these activities, remind students that there is no one-size-fits-all way for households to budget and meet their goals.

Emphasize that financial advising requires both analysis and empathy; advisors must help clients recognize where their money is going, understand how daily financial behaviors influence progress toward goals, and identify practical adjustments that honor client values while promoting financial stability. Throughout these activities, remind students that every household's plan is unique, and advisors must recognize that financial advising involves balancing numbers with values and helping clients make realistic, goal-aligned choices rather than perfect ones. Just as every household's financial plan is unique, adapt instruction to reflect your country's relevant financial systems and structures, including tax and government systems.

Students may work alone or in a team of up to three. Due to the nature of this project, student teams will require a more formal structure than what they, and you, may be used to. This includes setting standards for individual contributions to help prevent conflicts from arising, like assigning specific roles or setting ground rules for behavior, attendance, and contributions. The project is organized as a series of four iterative tasks, with a culminating event.

TASK 1: IDENTIFY FINANCIAL GOALS

Students analyze their clients' financial profile and identify both short- and long-term goals related to postsecondary education, housing, charitable giving, and retirement. They explore how personal values influence financial priorities and practice articulating these differences through discussion and role-play.

TASK 2: ANALYZE INCOME AND SPENDING

Students evaluate their clients' profile and analyze the income sources, spending habits, and debt to determine the clients' current financial situation. They calculate cash flow and assess spending against benchmarks using the

Budget Planning Document and the Comprehensive Financial Plan Template. Students also review pay stubs to analyze taxes, deductions, and take-home pay, reinforcing how taxation and benefits affect financial capacity and goal feasibility.

TASK 3: EVALUATE INSURANCE AND RISK MANAGEMENT

Students assess the clients' insurance coverage to determine whether existing protection aligns with their clients' goals and risk tolerance. Students explore how personal characteristics and behaviors influence premiums and how fraud-prevention strategies protect financial security.

TASK 4: EVALUATE INVESTMENT, SAVING, AND GIVING STRATEGIES

Students move from protection to growth, creating an evidence-based savings and investment plan. They use calculators and benchmarks to model time horizons, compounding, and risk–return trade-offs. Students also design a giving plan that aligns charitable contributions with the clients' values and budget.

CULMINATING EVENT: ADVISING THE CLIENTS

Students synthesize all project deliverables into a Comprehensive Financial Plan using the Comprehensive Financial Plan Template, including budgeting, taxes, insurance, investing, and charitable giving. They present recommendations to a simulated client demonstrating how evidence-based financial planning can be explained with empathy, professionalism, and clarity. Suggestions for authentic delivery formats are provided, with a specific example detailed in this guide.

Project Timing

This culminating project is designed to be completed along with Unit 5 instruction over the course of approximately five weeks. It may be adapted to fit local schedules and contexts. Strive to pace each task flexibly, allowing time for reflection, research, and peer review as needed.

Example Client Profile: The Davis Household

A sample financial client profile of the Davis household is provided on p. 207 of this guide. This profile includes detailed information about the household's income, expenses, debt, goals, insurance, and investments, providing students with a realistic foundation for their analysis and recommendations. A selection of household financial profiles will be available on AP Classroom; teachers can use a provided profile, modify one, or design their own.

Project Plan

Financial Advisor Project	Topics	Skills	Learning Objectives	Essential Knowledge	Previous Essential Knowledge	Deliverables
Task 1: Identify Financial Goals	5.1	1.B, 1.C 3.A	5.1 A 5.1.B 5.1.C	5.1.A.1, 5.1.A.2, 5.1.A.3, 5.1.A.4, 5.1.A.5 5.1.B.1, 5.1.B.2, 5.1.B.3, 5.1.B.4 5.1.C.1, 5.1.C.2, 5.1.C.3, 5.1.C.4, 5.1.C.5, 5.1.C.6	1.3.B.1, 1.3.B.3 2.2.A.3 3.1.A.1, 3.1.A.4 3.1.C.3 3.3.A.5 3.6.C.4, 3.6.C.5 4.1.D.1, 4.1.D.2, 4.1.D.3, 4.1.D.4, 4.1.D.5	Assignment 1 of the Budget Planning Document
Task 2: Analyze Income and Spending	5.1	1.B 3.B, 3.C 4.B	5.1.A 5.1.C	5.1.A.4 5.1.C.1, 5.1.C.2, 5.1.C.3, 5.1.C.4, 5.1.C.5, 5.1.C.6	3.2.C.3, 3.2.C.4 3.3.A.2, 3.3.A.5 3.6.C.4, 3.6.C.5 4.2.A.1	Assignment 2 of the Budget Planning Document
Task 3: Evaluate Insurance and Risk Management	5.2	1.B, 1.C 2.D	5.2.A 5.2.B 5.2.C 5.2.D	5.2.A.1, 5.2.A.2, 5.2.A.3, 5.2.A.4, 5.2.A.5 5.2.B.1, 5.2.B.2, 5.2.B.3, 5.2.B.4, 5.2.B.5, 5.2.B.6 5.2.C.1, 5.2.C.2, 5.2.C.3, 5.2.C.4, 5.2.C.5, 5.2.C.6 5.2.D.1, 5.2.D.2, 5.2.D.3	1.8.B.4 2.1.D.1, 2.1.D.2, 2.1.D.3 3.1.A.5 3.1.B.2 3.1.C.3 3.2.B.1 3.4.B.6 3.5.C.7	Assignment 3 of the Budget Planning Document and a Fraud Protection Tip Sheet
Task 4: Evaluate Investment, Saving, and Giving Strategies	5.3	1.A, 1.C 3.C, 3.D	5.3.A 5.3.B 5.3.C	5.3.A.1, 5.3.A.2, 5.3.A.3, 5.3.A.4, 5.3.A.5, 5.3.A.7 5.3.B.1, 5.3.B.2, 5.3.B.3, 5.3.B.4, 5.3.B.5, 5.3.B.6, 5.3.B.7 5.3.C.1, 5.3.C.2, 5.3.C.3, 5.3.C.4, 5.3.C.5, 5.3.C.6	4.3.B.3	Assignment 4 of the Budget Planning Document and a giving recommendation that integrates values, goals, and affordability
Culminating Event: Advising the Clients	5.1 5.2 5.3	3.D 4.B	5.1 A 5.1.B 5.1.C 5.2 A 5.2.B 5.2.C 5.3 A 5.3.B 5.3.C		4.1.B.1, 4.1.B.2, 4.1.B.3	Assignment 5 of the Budget Planning Document, a Comprehensive Financial Plan, visualizations or supporting materials, and client presentation

TASK 1:
Identify Financial Goals

Task 1 Deliverable:

- Assignment 1 of the Budget Planning Document

Driving Question

How can we, in the role of financial advisors, help clients identify their goals and assess how their current financial behaviors may help or harm their ability to reach those goals?

Student Objectives

The project begins by asking students to consider what matters most in a household's financial life. Just like professional financial advisors, students start by reviewing their clients' financial profile and identifying the clients' stated short- and long-term goals. These typically include preparing for postsecondary education, making housing decisions, and planning for retirement income. The emphasis is not on offering solutions at this early stage, but instead on understanding the clients' aspirations, current financial behavior, and the trade-offs they will face along the way. Consider framing this task with an entry-event scenario, such as a first client interview or meeting. This helps students understand their role as financial advisors; they should focus on clarifying what matters most to the household, how current habits and constraints show up in the data, and which trade-offs the clients are already facing, rather than jumping straight to solutions.

Activities

On day 1, provide students with copies of a household financial profile. The Davis Family example is included on p. 207 of this guide. Ask students to identify the household's stated financial goals and identify any positive factors or concerns they notice. Ask students to consider: How would you characterize this household's current financial habits and decision making? (Consider their cash-flow management, saving behavior, use and type of debt, and planning for future goals. For example, do they seem more conservative or aggressive, more short-term or long-term focused, and more thoughtful or more reactive in how they manage their money?)

Distribute copies of the Budget Planning Document and ask students to respond to Assignment 1 prompts 1–2.

On day 2, review what students learned about consumer budgeting during the course. Then engage students in an activity to identify and discuss the components of a household budget: sources of income, types of savings, charitable contributions, and categories of expenses (distinguishing between fixed expenses and variable expenses). Ask students to identify key income and expense data in their financial profile, and then assess their clients' financial behavior and risk tolerance by responding to Assignment 1 prompts 3–5 in the Budget Planning Document.

On day 3, begin by reviewing what students learned about taxes during the course. Engage them in an activity or instruction about the specific types of taxes households pay and why different households pay different amounts in taxes. Briefly define an example of a tax deduction and distinguish between tax deductions and tax credits, and use a simple tax bracket example to show

that the U.S. federal income tax system is progressive, meaning higher levels of income are taxed at higher marginal rates. Ask students to review their provided financial profile and identify the types of taxes paid by the household. Highlight how a portion of each paycheck is withheld for certain taxes, reducing the household's net income and affecting how much is available to meet goals.

Note: Some taxes, such as sales taxes, property taxes, or capital gains taxes, may not be reflected in their assigned profile but should still be covered in class.

On day 4, begin by reviewing what students have learned about compensation and benefits, such as health insurance and retirement savings plans. Engage students in an activity to decode the clients' sample pay stub and describe each of the deductions. As they decode the pay stub, have students calculate the difference between gross pay and net pay for one period and explain how income tax withholding contributes to that difference. Briefly explain that payroll taxes like Social Security and Medicare (in the United States) fund government programs that can provide income and health coverage in retirement or in certain life circumstances. Ask students to respond to Assignment 1 prompts 6–7 in the Budget Planning Document.

Optional Extension Activities

- Personal Reflection: Ask students to write a short paragraph comparing their own financial goals (current or future) to the goals in the financial profile. For example, ask them if they had to choose between saving for college or buying a car, which would they prioritize, and why? This homework emphasizes that financial goals are shaped by context, values, and opportunity costs.
- Research Extension: Assign students to read or watch short resources on budgeting strategies (e.g., the 50/30/20 rule, zero-based budgeting, or "pay yourself first"). Ask them to prepare one piece of advice from these strategies they might recommend to their clients in the next task.
- Competition Prep*: For practice with perspective taking, students can create a short scenario card: "Imagine you are part of a household that must decide whether to move to a larger home or save for retirement. Write three sentences explaining your reasoning." These cards can be swapped and role-played when students have time to prep for competitive events.

Deliverable

By the end of Task 1, the deliverable is Assignment 1 of the Budget Planning Document, including the summary for transfer to the Comprehensive Financial Plan. In later tasks, students will revisit the clients' goals as benchmarks for evaluating budgeting, insurance, and investment strategies.

*Competition Prep activities refer to existing competitive events offered through Career and Technical Student Organizations (CTSOs) within CTE Business, Marketing, and Finance pathways. The organizations, such as DECA, FBLA, and BPA, are national and international co-curricular student organizations. Participation in these events is optional for this course and at teacher discretion.

TASK 2:
Analyze Income and Spending

Task 2 Deliverable:

- Assignment 2 of the Budget Planning Document

Driving Question
What is my clients' current financial situation?

Student Objectives
Students develop the ability to use financial data as evidence for decision making within the context of personal finance. They document their findings in Assignment 2 of the Budget Planning Document and begin organizing observations that will inform the sections on budgetary strategy and debt management in their final Comprehensive Financial Plan.

Activities
On day 1, explain that financial advisors begin each engagement by developing a clear picture of their clients' current financial position. Have students highlight all income sources described in their household profile, then categorize all household expenses as either fixed or variable. Ask students to assess:

- Which expenses are essential or non-negotiable
- What patterns suggest opportunities for savings or adjustments
- How these patterns may reflect the household's financial habits or values

Have students respond to Assignment 2 prompts 1–2 in the Budget Planning Document.

On day 2, focus on the concept of budgeting benchmarks as tools for comparing household spending to recommended standards, which is similar to how businesses use key performance indicators (KPIs). Share how advisors use generally accepted financial guidelines (e.g., 25–30% for housing) to identify overspending in specific categories. Have students research three credible financial sources and record benchmark data for housing, transportation, and groceries in Assignment 2 prompts 3–4 in the Budget Planning Document, before responding to prompt 5. Ask students to then identify what trade-offs their clients can consider in order to re-allocate spending to better meet their goals.

On day 3, guide students through completing the Household Budget Template by totaling income and expenses and calculating the monthly surplus or deficit. Have students interpret results and explain what those numbers reveal about their clients' priorities and challenges. They should consider how this budget reflects the clients' goals identified in Task 1. Identifying what patterns indicate stability or financial stress will help students develop their initial analysis as they summarize their findings in Assignment 2 prompt 6 in the Budget Planning Document.

On day 4, review the concept of net worth and introduce debt analysis as part of assessing overall financial health. Then ask students to compile household assets and liabilities to calculate net worth, using Assignment 2 prompts 7-8. Note that net worth may be negative. They should record the clients' total assets, including investments and savings, as well as total debt and monthly obligations. Remind students to include any credit card debt and payments within their

evaluation. Discuss interest rates, minimum payments, and the differences between types of debt, such as an auto loan, which has fixed payments over a defined and agreed upon timeframe, and a credit card, which is an outstanding balance that many borrowers carry over from month to month with an undefined payback period and only minimum required monthly payments.

Model how interest rates increase the cost of borrowing over time. Then ask students to research current rates for credit cards, mortgages, and auto loans and to consider strategies such as paying down high-interest debt or minimizing credit use. Ask students to use what they have learned about the household's current financial situation to respond to prompt 9.

Optional Extension Activities

- Research Extension: Have students find one budgeting strategy (e.g., zero-based budgeting or the envelope system) and write a one-sentence summary of how it could apply to the clients' household.
- Competition Prep: Ask students to create a short "budgeting dilemma" card. It may say something like, "The client can increase spending on X but would need to cut back on Y. Which option would you recommend?" Students can swap cards and facilitate their role-play with each other in their next class.

Deliverable

By the end of Task 2, the deliverable is Assignment 2 of the Budget Planning Document, including the summary for transfer to the Comprehensive Financial Plan.

TASK 3:

Evaluate Insurance and Risk Management

Task 3 Deliverables:

- Fraud Protection Tip Sheet
- Assignment 3 of the Budget Planning Document

Driving Question

How do households reduce their risk of financial losses, including those related to fraud and deception?

Student Objectives

Students shift from analyzing spending to understanding how households protect themselves from unexpected loss. Acting as financial advisors, students examine their clients' insurance coverage, evaluate risk tolerance, and determine whether the household's protection aligns with its goals and resources. They also learn how personal characteristics, behaviors, and fraud awareness influence overall financial stability. Students record findings in Assignment 3 of the Budget Planning Document.

Throughout these activities, remind students that an advisor's role is to balance cost, risk, and protection. Advisors help clients make informed decisions that safeguard their finances without overspending on unnecessary coverage.

Activities

On day 1, review the concept of risk management and remind students that insurance transfers financial risk from an individual to an insurer. Share with students some everyday risk scenarios and have them decide in each scenario whether to self-insure by increasing emergency savings or transfer risk by purchasing (if available) an insurance policy. Debrief as a class, highlighting how people decide which losses they can afford versus those they must insure against. Conclude the activity by defining the various types of insurance (e.g., health, auto, renters/home, life, and disability) and discussing which are required by law.

On day 2, connect physical risk to financial fraud and deception. Define fraud and discuss the common forms of fraud that affect individuals and households, like phishing, identity theft, and predatory lending. Include at least one example of insurance fraud, such as an individual exaggerating a loss on an insurance claim. In small groups, have students analyze short scenarios showing different scams; ensure that at least one scenario involves insurance fraud and others reflect high-profile scams from local or national current events.

Each group should identify possible concerns and prevention steps and then contribute one idea to a class list of fraud protection strategies. Review consumer protections such as comparing loan offers, resisting high-pressure sales and using credit freezes. Students then begin drafting a Fraud Protection Tip Sheet.

On day 3, guide students through evaluating their household profile. They should identify or infer existing coverage and assess whether it matches the clients' needs and risk tolerance, responding to Assignment 3 prompts 1–2 in the Budget Planning Document. Discuss key terms such as premium, deductible, coverage limit, and claim, as well as essential policy evaluation elements like how increasing deductibles lowers premiums but raises out-of-pocket costs. In pairs, have students locate gaps or overlaps in coverage and discuss how household characteristics (age, health, dependents, credit history) influence premiums for their clients, recording their recommendations in Assignment 3 prompts 3–4 in the Budget Planning Document.

TEACHER TIP

The Fraud Protection Tip Sheet is one component of the students' advice to their fictional clients. The format of this deliverable is at your discretion—for example, it may be a checklist or a narrative. The Tip Sheet should identify common fraud or deceptive practices relevant to the client household, such as phishing, identity theft, predatory lending, or insurance fraud, and it should outline clear actions the household can take to reduce risks.

On day 4, explore how personal and household factors affect both insurance and fraud vulnerability. Discuss how risk tolerance, number of dependents, and other factors (e.g., driving record and smoking) influence insurance costs. Present two short policy summaries that illustrate different deductible and premium options, then lead a brief discussion, asking which plan would best fit the clients' household and why? Conclude by asking students to revise both their insurance recommendations from day 3 and the Fraud Protection Tip Sheet to reflect their new understanding, and complete Assignment 3 prompt 5 in the Budget Planning Document.

Optional Extension Activities

- Personal Reflection: Have students write a short paragraph about which type of insurance their future self may need after graduating high school (e.g., health, auto, and cellphone protection) and explain why it would be a priority and how it protects them against loss.
- Case Comparison: Assign a short reading or video on the financial consequences of being uninsured. Students can then summarize in 2–3 sentences how a lack of insurance or fraud protection could jeopardize household financial goals.

- Competition Prep: Provide students with a short scenario such as, "The clients' car is totaled in an accident. The driver was a dependent minor with only a permit. What happens next?" Then have them write a brief response outlining the financial impact and how proper coverage could have mitigated the loss.

Deliverables

By the end of Task 3, the deliverables are a Fraud Protection Tip Sheet and Assignment 3 of the Budget Planning Document, including the summary for transfer to the Comprehensive Financial Plan.

TASK 4:

Evaluate Investment, Saving, and Giving Strategies

Task 4 Deliverables:

- Assignment 4 of the Budget Planning Document

Driving Question

How can we help clients design a personalized investment, saving, and giving strategy that balances their goals, risk tolerance, time horizon, and values?

Student Objectives

Students move from protecting assets to planning for growth. Acting as financial advisors, they evaluate the clients' saving and investing choices, calculate how much the household must save to reach each goal, and compare investment options using risk–return data and benchmarks. Students also learn how inflation, fees, and behavioral factors affect real returns and how charitable giving can be integrated into a sustainable financial plan.

Throughout this task, emphasize that investing and charitable-giving decisions are both value driven and evidence based. Advisors use clear reasoning, simple tools, and client priorities to make recommendations that balance risk, return, and impact.

Activities

On day 1, help students estimate the cost and time horizon to attain each of the clients' goals, with today's deliverable focused on the retirement goal. Start by asking students to respond to prompts 1–4 on Assignment 4 in the Budget Planning Document, which address the household's assets, goals, and time horizon.

Now shift the focus to the household's retirement goal. Model how to use a retirement calculator to estimate a target retirement savings amount, the time horizon to retirement, and the monthly savings required to stay on track. Explain that students should also consider available national retirement benefits programs. In the United States, individuals may receive retirement benefits through Social Security as early as age 62, but their benefit amount is higher if they wait until age 70. Online calculators are available to help project potential Social Security benefits based on different retirement ages for the fictional household. Have students identify the trade-offs the clients' household may face if they try to fund all goals at once, with particular attention to how retirement contributions might be increased, reduced, or delayed. They should record their findings in Assignment 4 prompt 5 in the Budget Planning Document and hold prompts 6–7 for Day 2, after they review investment vehicles and risk/time horizon alignment.

On day 2, review how risk tolerance and time horizon influence investment decisions. Remind students of the savings and investment vehicles they studied earlier in the course—from simple high-interest savings accounts to CDs, money market accounts, stocks, and bonds, and introduce new ones like mutual funds. Explain that diversification spreads risk across different asset types, balancing potential growth and stability. Ask students to order investment products from lowest to highest risk and identify which align with short-, medium-, and long-term goals. Then have students use that analysis to recommend appropriate financial assets for the clients' goals and record their recommendations in Assignment 4 prompts 6–7 in the Budget Planning Document.

On day 3, direct students to focus specifically on the clients' housing goal(s) and work to complete the Housing Goal section of Assignment 4 prompts 8–9 in the Budget Planning Document. Model how to use a mortgage calculator to estimate the required down payment and monthly mortgage payments (including taxes and insurance) for a home, and then have students compare the projected payment to the household's current housing costs and to recommended budget benchmarks (e.g., housing as a percentage of net income). Ask students to use these calculations, along with what they know about the clients' savings, debt, income stability, and credit factors, to decide whether to recommend maintaining current housing or pursuing a home purchase on the current timeline and to record a brief, data-based justification in their Budget Planning Document.

On day 4, have students turn their attention to the clients' postsecondary education goal(s) and complete the Education Goal section of Assignment 4—prompts 10–11 in the Budget Planning Document. Model how to use a college cost calculator to estimate the total cost of attendance for at least one program (including tuition, fees, housing, and other expenses) and how that cost might differ across institution types or locations. Then guide students in outlining a realistic funding mix that could include family savings, scholarships and grants, work-study or part-time work, and student loans. Emphasize the differences between federal and private student loans, including typical interest rates and repayment terms, and have students estimate a plausible monthly loan payment the client or their family member might face after graduation. Ask students to evaluate how this education plan would affect the household's budget and ability to achieve other goals by considering what level of student debt is manageable alongside ongoing housing costs and retirement savings. Using their cost estimates, they should record potential funding ideas and a brief, data-based recommendation about whether to pursue, delay, or modify the education goal in Assignment 4—prompts 10–11 in the Budget Planning Document. They will then adapt this work into the education section of their Comprehensive Financial Plan.

On day 5, introduce charitable giving as part of a holistic financial plan. Discuss how households choose organizations that align with their values and how giving decisions can affect long-term goals. Explain how to create a giving plan: by identifying a cause or causes that they support and determining giving type (e.g., one-time, recurring, or legacy). Students must consider the budget impact, potential tax benefits, and their clients' values in building this plan. Using the clients' financial profile, have students evaluate any existing charitable giving and propose one budget-aware, values-aligned giving recommendation and record their recommendations below Assignment 4 prompt 12 in the Budget Planning Document.

On day 6, have students apply benchmarks as tools for measuring investment performance and setting realistic expectations about financial returns. Provide a brief overview of major indices (such as the S&P 500 or Dow Jones, which are not addressed in the course framework but provide useful context), and explain why fees and inflation matter when comparing returns. Direct students to select one benchmark for a proposed investment vehicle and share a brief explanation with the class describing how it can guide expectations. Discuss diversification and guide students to an understanding of how spreading investments across stocks, bonds, and other financial assets reduces risk.

On day 7, explain that inflation, fees, behavioral biases, and taxes all impact real returns and that emotions can affect decision making. Online tools or charts can be used to show how a 2–3% annual inflation rate erodes purchasing power and how investment fees compound over time. Discuss common behavioral biases, including overconfidence and loss aversion, and explain how advisors can help clients manage them. Use a brief example to illustrate a capital gains tax. For instance, show how a $1,000 profit from selling an investment would be reduced by a capital gains tax, and compare that to how the same $1,000 would be taxed as ordinary income. Students should revisit the required monthly contribution estimates they determined in prompt 5 and adjust them for inflation, taxes, and fees. Then ask them to analyze how these changes affect the projected outcomes and identify behavioral tendencies that could influence their clients' decisions. Students can make any necessary adjustments to the required monthly contributions to meet savings goals in prompt 5.

Finally, guide students in synthesizing all Task 4 findings (their suggested savings target, investment strategy, and giving plan) into a concise written recommendation for their clients. Students should start by recording the total impact of their recommendations on the household's monthly budget in the Budget Impact Table and then record notes in the summary for transfer section.

Optional Extension Activities

- Competition Prep: Have students respond to a scenario such as "Your client wants to increase their donations to a nonprofit but are concerned it will impact their college savings goals timeline. How can they adjust their investment strategy to balance both priorities?"
- Inflation and Fees Hypothesis Testing: Ask students to propose a testable hypothesis, such as "if inflation rises, then average stock market returns (adjusted for inflation) will decline" or "higher investment fees are associated with lower long-term portfolio growth." Students can then gather recent financial data or credible articles to evaluate their hypothesis. They should analyze whether evidence supports or refutes their claim and summarize the strength of the relationship between the factor (inflation, interest rates, or fees) and investment outcomes.

Deliverables

By the end of Task 4, the deliverables are Assignment 4 of the Budget Planning Document, including the summary for transfer to the Comprehensive Financial Plan, and a giving recommendation that integrates values, goals, and affordability.

CULMINATING EVENT:
Advising the Clients

Culminating Event Deliverables:

- Assignment 5 of the Budget Planning Document
- Comprehensive Financial Plan
- Visualizations or supporting materials to communicate findings clearly (charts, graphs, or summary tables)
- Professional client presentation

Driving Question

How can we communicate sound financial advice in a clear, persuasive, and empathetic manner?

Student Objectives

In the culminating event, students complete their roles as financial advisors by integrating work from all four tasks into a complete financial plan and formal deliverable. As students prepare their overall recommendations, prompt them to pull in their goal analyses from the Budget Planning Document related to postsecondary education, housing, retirement, and charitable giving so that each becomes part of the clients' broader investment and savings strategy. This deliverable should demonstrate evidence-based reasoning, professionalism, and empathy by presenting recommendations that align with the household's goals, values, and financial realities.

Activities

On day 1, have students review their deliverables from Tasks 1–4 and respond to Assignment 5 prompts 1–2 in the Budget Planning Document to compile all recommendations and identify how each one affects the clients' budget. Have students create their final recommended budget, reflecting their proposed adjustments, on a clean version of the Household Budget Template. Emphasize that financial planning is an iterative process of balancing goals, resources, and risks.

On days 2–3, students should transfer data and notes from the Budget Planning Document to their Comprehensive Financial Plan, using the Comprehensive Financial Plan Template, and begin to synthesize and summarize advice. Provide guidance and oversight on how they can map out all of their recommendations before writing a concise executive summary and recommendations section that clearly explains how each element of the plan supports the clients' goals. Encourage students to reference data and insights from all documents, asking themselves:

- How do these recommendations reflect both the clients' priorities and their constraints?
- What trade-offs had to be made, and why?

On day 4, transition from written analysis in the Comprehensive Financial Plan Template to professional communication. Explain that effective advisors balance data-driven reasoning with empathy and clarity. Inviting guest evaluators from the local community or finance-related professions to observe presentations and play the role of the client is highly encouraged. Local Chambers of Commerce can be useful partners for community involvement.

On day 5, have students present their final Comprehensive Financial Plans and supporting materials. Organize students and guests into advisory group sessions or simulated client meetings. Encourage student advisors to use plain language rather than technical jargon as they:

- Present their comprehensive household financial plan using selected visuals
- Reference key deliverables (Budget Planning Document and notes)
- Respond to questions that test their reasoning, clarity, and professional tone

Prep peers or guests who are serving as clients to ask probing questions. Consider drafting question sheets (like those used in competitive events) that include questions, space for notes, and a rubric. Suggested questions include:

1. What trade-offs did you consider when recommending this investment strategy for me?
2. How does this plan reflect my tolerance for risk?
3. If inflation or interest rates rise, how will that affect my ability to meet my goals?
4. If my circumstances change, due to something like a job loss or medical emergency, or new goals arise, how would you recommend adjusting this plan?

Optional Extension Activities

- Personal Reflection: Have students write a one-page summary identifying the most valuable financial concept learned during the project and how it could apply to personal financial goals.
- Peer Feedback: Ask students to review a classmate's financial plan and write one paragraph highlighting the strength of their analysis and one suggestion for improvement.
- Research Extension: Have students research one current event related to financial advising, investment trends, or consumer protection and summarize how it connects to topics from the project.

Deliverables

At the end of the culminating event, the deliverables are Assignment 5 of the Budget Planning Document, a Comprehensive Financial Plan, visualizations or supporting materials to communicate findings clearly (charts, graphs, or summary tables), and a professional client presentation delivered in one of several authentic formats (e.g., in-person meeting, role-play, recorded video, or written advisory report).

Frequently Asked Questions

1. **Is there a right or wrong way for students to build their financial plans?**
   No. Just like in the Business Canvas Project, success in this project is measured by how well students apply financial literacy concepts, weigh trade-offs, and communicate their reasoning. The goal is for them to show understanding and thoughtful decision making, not to produce "right" answers.
2. **What should I do if students struggle with math in budgets or investments?**
   You can provide scaffolds such as budget templates, calculators, or online tools. The focus should be on interpreting what the numbers mean and how they connect to financial goals, not on advanced calculations.
3. **How do I handle sensitive topics if students compare the finances of their own family to that of their client profile?**
   Make it clear from the start that the fictional client profile is the shared focus. When personal connections are invited (like reflections or family interviews), keep them optional and emphasize that all sharing should be voluntary.
4. **Can students work in teams?**
   Yes, though it is not required. Small groups of two or three can collaborate effectively, especially on activities that involve role-play or peer advising. However, each student in a group should maintain their own copy of deliverables (budget planning documents, recommendations, etc.) to ensure accountability and provide the opportunity for individual assessment. Due to the nature and length of this project, student teams will require a more formal structure than what they, and you, may be used to. This includes setting standards for individual contributions to help prevent conflicts from arising, like assigning specific roles or setting out ground rules for behavior, attendance, and contributions.
5. **What if students have trouble understanding insurance or investment concepts?**
   Use analogies, real-world hooks, and interactive activities to make abstract ideas concrete. Focus on conceptual understanding and application to the client household, not technical jargon.
6. **How much class time should I devote to the project?**
   The project is designed for approximately 24 instructional periods (about five weeks) with an additional 20 days allocated to extended coverage of personal finance. That said, you can adjust the pacing to fit your context. Some tasks may need more time if students require extra practice or if you want to invite guest speakers to enrich the experience.
7. **How should I grade the project?**
   Assessment should emphasize process and application. You may grade individual deliverables along the way, including the culminating event and student presentations of their financial plan. Rubrics should reward clarity, reasoning, relevancy, and evidence used, not whether a financial strategy is designed to generate recurring income from the client household. A rubric to help guide teacher scoring of the Financial Advisor Project is provided on p. 234.

8. **What if students don't take the client role-play seriously?**
   Establish norms early for professionalism and authenticity. Encourage students to imagine that their clients are counting on them. You can heighten authenticity by staging the culminating event in a different space (like a library or office setting) or inviting guest volunteers to play the role of clients.
9. **What if students are anxious about presenting their advice at the end?**
   Offer flexibility. Some students may prefer to write a professional-style report or record a video consultation rather than role-play live. What matters is that they demonstrate the ability to explain their reasoning clearly and professionally. You can also scaffold presentations with practice rounds, peer feedback, or smaller group settings to build confidence.
10. **What are the acceptable uses of AI on the project?**
    Consult the AP Program's latest guidance on the appropriate use of artificial intelligence tools and related services, available on **AP Central**.
11. **Can students use their project for career and technical student organizations (CTSOs) or other competitions?**
    Yes, this is highly recommended and encouraged. Depending on when this project is facilitated, students' projects or project components can provide support for, or contributions to, CTSO events within BPA, DECA, and FBLA. Student projects are also excellent preparation for the National Personal Finance Challenge sponsored by the Council for Economic Education. Other applications are at your discretion.
12. **What are some suggested ways to use the supplied household financial profiles?**
    While the AP-provided profiles were developed with the course framework and guides for implementation, you are encouraged to create your own that are more directly related to your community's demographics and market. The primary example provided with this guide, The Davis Family, is an ideal profile for a class example or reference and for use as the basis for any "I do" and "we do" activities.

SUPPORTIVE PROJECT GUIDE FOR TEACHERS

ACTIONS THAT HELP:

- Reminding students that financial advice is about reasoning and trade-offs, not producing a perfect plan but rather a plan that is meaningful and relevant to their clients
- Providing students with class time to work on the project
- Framing sensitive activities (like family interviews or personal reflections) as optional
- Asking students questions to promote deeper understanding and reflection on the process
- Inviting local financial advisors and/or banking professionals as guest lecturers (if permitted)
- Challenging students to test their assumptions for accuracy
- Encouraging role-play and authentic communication during advising sessions

ACTIONS THAT HINDER:

- Telling students there is only one correct solution for a household's financial plan
- Assuming students already know how to interpret financial documents or investment tools without guidance
- Requiring students to share private or family financial information
- Waiting until the culminating event to assess communication skills
- Rushing through multiday tasks without allowing students to reflect or practice applying skills
- Assuming your students have the same point of view, level of understanding, or economic status

Davis Family Financial Information

The Davis Family

Family members

Name	Age	Employment	Annual Gross Salary	Credit Score	Risk Tolerance
Yvonne	37	Registered nurse	$70,000	680	Low
Samuel	35	Construction worker	$38,000	590	Medium
Diana	14	Student	--	--	
Javier	12	Student	--	--	
Risa	6	Student	--	--	

Yvonne and Samuel Davis live in the outskirts of a midsized midwestern American city, where they both need cars to get to work. Yvonne has a college degree and works as a registered nurse at a local medical practice. Samuel has taken college courses but has not yet completed his two-year degree in construction management. He works in construction, typically building new single-family homes.

Their combined salaries in a typical year are $108,000, or $9,000 a month before taxes and other deductions.

Goals

The Davises feel fortunate to be earning $100,000+ a year, but with three children and little in savings or retirement funds, it never seems like enough. They want to save for college and retirement, and they are also considering buying a house to build equity.

Housing

The family moved from a three-bedroom suburban apartment to a four-bedroom rental house in the outskirts of the city after Risa was born, so that each child could have their own bedroom. They are now considering whether they can afford to buy a house in the area where they live. At the local bank, they were told they would qualify for a 5% interest rate on a 30-year loan, if they could make a 20% down payment. They are currently paying $2,500/month in rent. In their geographic area, four-bedroom homes in good condition generally cost $350,000–$400,000.

College

The Davises want all three of their children to have the opportunity to go to a two-year or four-year college, so that they will be able to get good-paying, reliable jobs with benefits, like the one Yvonne has. Yvonne paid for nursing school using loans and working part time; she has a balance of approximately $24,000 remaining on her loans, which cost her $450/month. The Davises know their children will need to take out some loans for college, but they want to contribute as much as they can, so their kids are not carrying debt as young adults.

Diana is a strong student and a volleyball player, and she has told her parents that she wants to go to a large university. Javier dreams of developing video games but says he does not want to go to a four-year college. Risa is in kindergarten; her parents no longer have to pay for daycare, but it's much too early to know her interests.

Retirement

The Davises have been so busy managing their jobs, bills, and the kids' schedules that they haven't given much thought to retirement. They know they want to retire someday, ideally when they are around 67, but it seems impossible that they could ever stop working and afford the same lifestyle they are used to. They will work as long as they can, but Samuel knows the day will eventually come when he can't physically manage construction work.

Employment

Yvonne works full time as a registered nurse, and she has been at the same professional practice for five years. Her work offers insurance benefits, and Yvonne has selected the most comprehensive health insurance plan with a low deductible, because of her own chronic health challenges and the children, who face occasional illnesses and injuries. Her contribution to the premium is $500/month, which is a pretax deduction from her paycheck.

Samuel works for a locally owned construction company, but his workload varies seasonally and in response to changes in the economy. Although his gross salary last year was $38,000, and he expects to earn the same this year, he cannot predict his future income with much certainty.

Yvonne's monthly net pay after taxes and deductions is $4,348. Samuel's monthly net pay after taxes and deductions is (on average) $2,897. Together, their **typical monthly net pay is $7,245**.

Yvonne's Pay Stub: Semi-monthly (twice per month)

Earnings	This Period*		Year to Date
Regular		$2,917.00	$29,170.00
	GROSS PAY	**$2,917.00**	**$29,170.00**
Deductions	**Statutory (required)**		
	Federal income Tax	$78.00	780.00
	Social Security Tax	$180.00	$1,800.00
	Medicare Tax	$40	$400.00
	State Income Tax	$60	$600.00
	Other (voluntary)		
	Medical	$250.00	$2,500.00
	Dental	$25.00	$250.00
	Vision	$10.00	$100.00
	HSA	$50.00	$500.00
	401(K)	$50.00	$500.00
	NET PAY	**$2,174.00**	**$21,740.00**

*For the period ending May 15th

Monthly Expenses

The Davises have a variety of fixed and variable expenses each month. When their youngest, Risa, started school last year, they no longer had to pay for daycare, so they bought a new car for Yvonne.

Fixed Expenses:

- Rent: **$2,500**
- Student loan payments: **$450**
- Car payments: **$1,200** ($750 for Yvonne's new car, $450 for Samuel's car)
- Car insurance: **$170**
- Average utilities: **$750** (heat, water, electricity, cable, internet)
- Cell phone plan: **$150** (four phones)

Variable Expenses:

- Groceries: **$1,000–$1,400**
- Clothing/Entertainment: **$100–$250**
- Credit card payments: **$50–$300** (depending on cash after other expenses are paid)

Giving

The Davises contribute to the First Responder Family Support charity in honor of Samuel's father, who was a volunteer firefighter. They try to give $25/month but sometimes are unable to afford it.

Savings

The Davises have $1,500 in a savings account and a balance of $500 in their joint checking account. They do not currently have a savings plan, but they add to their savings when they have a surplus at the end of the month.

Debt

The Davises have three outstanding bank loans.

Loan	Monthly Payment	Number of Payments Remaining	Remaining Balance	Interest Rate
Yvonne's student loan	$450	60	$24,434.58	4%
Yvonne's car loan	$750	36	$25,000	5%
Samuel's car loan	$450	8	$3,533.43	5%

In addition, they owe $2,800 on their credit card, which has an APR of 23%. The minimum monthly payment on this card each month is 2% of the balance owed.

Investments

Yvonne has $45,000 invested in her employer-sponsored 401(k), which is a pretax retirement savings account. She is very nervous about losing her money, so she selected a conservative bond fund, which has a 5% average annual rate of return. She currently contributes 2% of her pretax income to this fund, which is matched by her employer. Her employer is willing to match up to a 5% contribution, but Yvonne reduced her contributions after Risa was born to free up more money for current expenses.

Insurance

The Davises have a comprehensive, low-deductible health insurance plan through Yvonne's job. She pays $250/paycheck toward the premiums. The plan has a $500 individual deductible and $2,000 family deductible. Her employer also offers a high-deductible plan, which has a $2,000 individual deductible and $6,000 family deductible. If Yvonne chose the high-deductible plan, her employer would put $1,000 in a health savings account (HSA) for her family's use, and she could allocate up to $8,000 in additional pretax income toward the HSA. The high-deductible plan would cost her $200/month or $100/paycheck.

Yvonne has life insurance of $100,000 and long-term disability insurance, which would pay her about 60% of her current income until retirement if she were to become too injured or ill to work for an extended period. Samuel does not have life insurance or long-term disability insurance because he works primarily as a contract employee.

The Davises have full-coverage car insurance on both of their cars, which costs them $170/month. Their insurance meets all of their state's requirements for bodily injury and property damage and also includes optional coverage for theft and noncash events such as fire or flooding.

CREDIT CARD STATEMENT

Samuel Davis
114 Hickory Dr
Anytown, USA

Payment Due Date: 11/1/27
New Balance: $2,800.00
Minimum Payment: $56.00

Account Summary	
Account Number 4444 8888 1111 3333	
Previous Balance	$2,803.41
Payment Credits	$56.07
Purchases	$0
Cash Advances	$0
Balance Transfers	$0
Fees Charged	$0
Interest Charged	$52.66
New Balance	**$2,800.00**

Payment Information	
Payment Due Date	11/1/27
New Balance	$2,800.00
Minimum Payment	$56.00

Minimum Payment Warning: If you only make the minimum payment each period, it will take you much longer to pay off your balance and you will pay significantly more in interest charges.

Budget Planning Document

Use this document throughout the project to record data, observations, and recommendations. As you learn more, you may want to go back and revise the ideas you previously recorded.

Assignment 1: Meet Your Clients

1. List the household's stated financial goals in the table below, along with a brief description of each goal. (For example, if a goal is "college education for their children," describe the children and their ages and any additional information about what kind of college they want to attend, what they want to study, etc.) Add whether each goal is short term or long term and the approximate time horizon (how many years until the household wants or needs to reach it).

Household Financial Goals	Short Term or Long Term?	Approximate Time Horizon	Supporting Details from Financial Profile

2. Record your observations about your clients' household values and current financial behavior in three key words or phrases. (Consider their spending, saving, borrowing, and any charitable giving described in the profile.)

3. Identify any steps or actions the client household is currently taking, as described in the financial profile, to achieve its stated goals.

4. Identify any information in the clients' financial profile that indicates a barrier to the household achieving its financial goals.

5. On a scale of 1–5, where 1 is very low risk tolerance and 5 is very high risk tolerance, how would you rate this household's overall risk tolerance?

   a. Circle one: 1 2 3 4 5

   b. Briefly explain your rating using evidence from the profile (e.g., job stability, family responsibilities, current saving and investing choices, or insurance choices and stated risk tolerance).

6. Examine the pay stub provided and determine the reasons for the difference between an individual's gross pay and net pay.

   a. Describe how the voluntary deductions listed on the pay stub provide benefits to the household.

   b. In one sentence, explain how the Social Security and Medicare taxes on the pay stub might benefit the clients later in life.

   c. Describe the difference between your client household's gross pay and net pay (either annual or monthly) as indicated in the financial profile. Explain why net pay is important for planning a household budget.

7. Name one type of tax credit this household might qualify for (e.g., a child-related or education-related credit) and explain how that credit could affect their overall cash flow.

Assignment 1: Summary for Transfer to the Comprehensive Financial Plan

From this section, you should be able to describe:

- Who the clients are and what their main financial goals are (with time horizons)
- What the clients' values and priorities appear to be, including any charitable giving
- What actions the clients are already taking and what barriers the household faces
- The clients' approximate risk tolerance
- Key points about the clients' pay, deductions, and why net pay matters for budgeting

Assignment 2: Analyze Income and Spending

Part of your job as a financial advisor will be to make recommendations about how your clients' household can adjust spending behavior in ways that enhance their ability to reach their stated goals. First, it is important to assess their current spending behavior.

1. Using the household financial profile, identify each of the following:
   - Monthly net pay _____
   - Monthly fixed expenses _____
     - Fixed expenses: _____
   - Monthly variable expenses _____
     - Variable expenses: _____
   - Monthly charitable contributions _____
   - Monthly contributions to savings _____
2. Identify the fixed and variable expenses that are loan or credit card payments from the provided materials.
   - Fixed expenses:
   - Variable expenses:

   a. What is the household's current total debt? _____

   b. What is the total amount the household is spending each month to repay debt? _____
3. Research recommended guidelines for household spending within specific categories. What is the recommended maximum percentage of household income that should go to each of the following?
   - Housing (rent or mortgage) _____
   - Groceries _____
   - Transportation _____
4. Determine the percentage of net pay the client household is currently spending on housing, groceries, and transportation, and whether they stay within the recommended limits. You will need to reference the household's total monthly net pay (included in the household financial profile) for these calculations.

Category	Total Spending	Total Spending/Net Pay (calculate as a percentage)	Is spending within the recommended limit?
Housing			
Groceries			
Transportation			

5. Using the table in prompt 4 above, identify categories where the household's spending exceeds recommended limits. For each category that exceeds the recommended limit, identify whether the spending is fixed or variable.

Household Budget Template

Monthly Income			
INCOME		Current	Suggested
Monthly Net Pay (Earner #1)			
Monthly Net Pay (Earner #2)			
Total Monthly Income			
Monthly Expenses			
	EXPENSES	Current	Suggested
HOUSING	Rent or Mortgage		
	Other Housing (tax, insurance)		
FOOD	Groceries		
TRANSPORTATION	Car Payment 1		
	Car Payment 2		
	Car Insurance		
ADDITIONAL MONTHLY BILLS	Utilities		
	Cell Phone		
	(other)		
PERSONAL & HOUSEHOLD	Clothing/Entertainment		
	Charitable Donations		
SCHOOL	Student Loan Payments		
CREDIT CARD	Credit Card Payments		
SAVINGS	Contributions to Savings or Investment Accounts		
	Total Monthly Expenses		
	Monthly Surplus or Shortage		

6. In 2–3 sentences, summarize your assessment of the household's current financial position based on income and spending. Identify one strength (something they are doing well) and one concern (something that may hold them back from reaching their goals).

7. A net worth statement provides a complete picture of a client's financial status. This allows professional advisors to create realistic financial plans, from retirement strategies to saving for major life events, and establish sound next steps and updates to help clients meet their goals. Using the information in the household financial profile, complete the tables below.

   a. **Assets**
   (All bank accounts, all savings, all retirement accounts, and any owned property of value)

Asset	Amount/Value
Total Assets:	

   b. **Liabilities**
   (All outstanding debts, including car loans, student loans, credit cards, and other liabilities)

Liability	Amount Owed
Total Liabilities:	

   c. **Net Worth Calculation**
   Total Assets – Total Liabilities = **Net Worth:** _____

8. Using the household financial profile, identify and summarize the household's current investments and savings.

Account Type	Balance	Approx. Rate of Return (if provided)	Notes

Based on these accounts, how would you describe the household's overall investing approach? (For example, is it conservative, moderate, aggressive, irregular, minimal, or inconsistent? Support your professional judgment.)

9. Synthesis: What Does This Mean for Their Goals?
Using what you learned about the household's assets, debt, and savings/investment behavior, answer both questions below.
   a. What is one strength in the household's current financial position that may help them reach their goals?

   b. What is one concern or limitation that may make it harder for them to reach their goals?

Assignment 2: Summary for Transfer to the Comprehensive Financial Plan

From this section, you should be able to describe:

- The household's monthly net income and how it compares to their total fixed and variable expenses, including charitable giving and savings contributions
- The household's current debt load and monthly debt payments, and how these affect their available cash flow
- How the household's spending on housing, groceries, and transportation compares to recommended budgeting guidelines
- The household's total assets, total liabilities, and current net worth
- The household's savings and investment accounts, any known rates of return, and what this suggests about their overall investing approach (e.g., conservative, moderate, or aggressive)
- At least one strength in the household's current financial position and one concern or limitation that you will need to address in your recommendations

Assignment 3: Evaluate Insurance and Risk Management

As a financial advisor, you will help clients protect themselves against unexpected losses. In this assignment, you will evaluate your client household's current insurance coverage and risk exposure and identify at least one fraud prevention or consumer-protection strategy that fits their situation.

Use the household financial profile and any related project materials to respond to the prompts below.

1. Current Insurance Coverage

   List each type of insurance the household currently has. Include who or what is covered, the main coverage limits or features (if provided), and the monthly cost.

Type of Insurance	Who/What Is Covered	Key Coverage Details (limits, deductible, key features)	Monthly Cost

2. Adequacy of Coverage

   For each type of insurance listed above, rate how well you think the coverage fits the household's needs. Use a scale of 1–5, where 1 is significantly underinsured, 3 is adequate, and 5 is more coverage than they likely need.

Type of Insurance	Adequacy Rating (1–5)	Why did you choose this rating? (Use evidence from the profile.)

3. Gaps and Risks

   Based on the household financial profile and your tables above:

   a. Identify at least one gap where the household may be underinsured or missing a type of insurance that could be important. Potential gap(s) in coverage:

b. Identify at least one area where they may be paying for more coverage than they realistically need. Potential area(s) of unnecessary or excessive coverage:

4. Recommended Insurance Changes and Budget Impact

   Recommend at least two specific changes to the household's insurance coverage. For each recommendation, explain both:

   - How it changes their risk exposure (more protection or less)
   - How it affects their monthly budget (increase, decrease, or no change)

Recommended Change	Effect on Risk (how does this protect or expose the household?)	Effect on Monthly Budget (approx. $ change per month)

5. Fraud and Consumer Protection

   Households also face risks from fraud and predatory financial practices.

   a. Identify two types of financial fraud or predatory practices that could realistically affect this household (e.g., phishing, identity theft, payday loans, or misleading credit offers).

   b. For each type, describe at least one action the household can take to reduce their risk.

   c. Choose one of your suggested actions and explain why it is especially important for this household, given their goals and current situation.

Assignment 3: Summary for Transfer to the Comprehensive Financial Plan

From this section, you should be able to describe:

- What types of insurance coverage the household currently has, who/what is covered, and how much it costs each month
- Where the household appears to be adequately insured, underinsured, or potentially overinsured, with brief explanations
- At least two specific insurance recommendations, including how each change would affect both their risk exposure and their monthly budget
- At least one fraud or consumer-protection strategy that is realistic and appropriate for this household and why it matters given their goals and situation

Assignment 4: Evaluate Investment, Saving, and Giving Strategies

Saving and investing are two key components of a household financial plan. Saving is about safety and liquidity as well as being prepared to meet short-term goals (like buying a new car) and handling emergencies (like illness or job loss). Investing is focused on building wealth over time to meet long-term goals, such as paying for postsecondary education, buying a house, and having income in retirement. In addition to typical savings vehicles, investments may include assets such as stocks, bonds, mutual funds, and a variety of specific retirement accounts.

Part of your job as a financial advisor will be to make recommendations about the clients' investments. First, it is important to assess their current savings and investments, as well as their time horizon and risk tolerance.

1. Calculate the household's total assets, including any bank accounts, money market accounts, home equity, and retirement funds, such as an IRA, a Roth IRA, a 401(k), or a 403(b).

2. Review the household's stated goals. Using the financial profile and online resources, develop a reasoned estimate of how much money the household would need to meet each of its stated goals. Note: You should develop your estimates based on assumptions (and some guesswork)—there is no single right answer.

   Education goal: _____ Source:_____

   Housing goal: _____ Source:_____

   Retirement goal: _____ Source:_____

3. Based on the household financial profile, what is the clients' approximate time horizon for meeting each goal? Note: Assume retirement at age 67.

   Education goal: _____

   Housing goal: _____

   Retirement goal: _____

4. What are your initial observations about the clients' assets, goals, and time horizon?

Retirement Goal

5. Use a retirement calculator to estimate how much additional money the household would need to save and invest each month (the required monthly contribution) to acquire sufficient savings for retirement, based on your findings in prompt 2. Test different potential rates of return, such as 2%, 5%, and 10%, to see how they impact the required monthly contributions.

   Required monthly contribution at 2% return: _____

   Required monthly contribution at __% return: _____

   Required monthly contribution at __% return: _____

   Required monthly contribution at __% return: _____

6. Based on the risks, potential returns, and time horizon associated with various financial assets, and your clients' risk tolerance, identify and describe the financial vehicles/assets you would recommend to this client. Note: Consider increasing or decreasing contributions to any employer-sponsored plans identified in the household financial profile as well as how capital gains taxes might affect your recommendations to the client.

7. Identify the dollar amount you would recommend your clients save and invest each month to reach their retirement goal: _____

Housing Goal

8. Use a mortgage calculator to determine the required down payment and monthly payment associated with achieving the clients' housing goal. Compare the monthly payment amount to the household's current spending on housing.

9. Based on your assessment of the clients' financial situation, do you recommend that the clients maintain their current housing or pursue their housing goal? Explain using data.

Education Goal

10. Identify four sources of funding a student or family can use to pay for postsecondary education in addition to using their savings.

    Source 1:_____

    Source 2: _____

    Source 3: _____

    Source 4: _____

11. Based on your assessment of the clients' financial situation and the cost of meeting their education goal, what dollar amount do you recommend the clients save each month to put toward meeting this goal? Explain.

Charitable Giving Goal

12. Review the household's current charitable giving (amount, frequency, purpose).

    Recommend whether the household should maintain their giving at its current level, increase it, reduce it temporarily, or restructure it (e.g., one-time vs. recurring giving). Explain your reasoning using both household values and budget constraints.

Budget Impact

In the table, list the monthly dollar amount the household will need to save/invest to meet each goal, and calculate the total of your recommendations.

Goal	Amount
Monthly savings required to meet education goal	
Monthly cost to meet housing goal (in excess of current rent)	
Monthly savings required to meet retirement goal	
Monthly allocations for charitable giving	
Total Impact on Budget	

Assignment 4: Summary for Transfer to the Comprehensive Financial Plan

From this section, you should be able to describe in your comprehensive final plan:

- The estimated total cost of the household's education goal, the time horizon, multiple funding sources, and a recommended monthly savings amount and vehicle
- The projected monthly mortgage payment, upfront costs of buying a home, comparison to current rent, and a recommendation (buy now, buy later, or maintain current housing)
- The estimated retirement savings target, required monthly contributions under different rates of return, and a recommended investment approach
- A clear, values-aligned charitable giving recommendation consistent with the household's budget and long-term goals

Assignment 5: Culminating Synthesis – Recommended Actions and Budget Impact

Review your work from Assignments 1–4. Use your notes, calculations, and observations to identify the specific actions you recommend for this household.

Your goal in this section is to pull together all of your recommendations and determine how each one affects the household's monthly budget. This will help you revise the Household Budget Template and prepare for the Comprehensive Financial Plan.

1. Summary of Recommended Actions

   For each recommendation you plan to make—whether related to insurance, saving for education, housing costs, retirement contributions, charitable giving, spending adjustments, or debt repayment—record the following:

   - Your recommended action
   - A brief description or rationale
   - The estimated impact on your clients' monthly budget

   Use the table provided to organize your recommendations.

Recommended Action	Description	Impact on Budget
Buy renters' insurance	*The household doesn't have renters' insurance, which is inexpensive according to MoneyGeek.com and aligns with their goal of minimizing risk.*	*+ $25/month*

Recommended Action	Description	Impact on Budget

2. Additional Recommendations

   List any additional steps you believe the household should consider related to:

   - Pursuit of additional income
   - Use of credit
   - Repayment on debt
   - Spending behaviors
   - Other financial decisions that may strengthen their budget or support their long term goals

   These recommendations may not fit neatly into a category above, but they should reflect what you believe would help the household improve its financial stability.

Culminating Synthesis Summary

From this section, you should be able to describe in your comprehensive final plan:

- The full list of recommended actions you are advising the household to take, along with the budget implications of each
- Any additional recommendations related to income, credit use, debt repayment, or spending adjustments
- A mathematically consistent recommended monthly budget that incorporates all of your proposed changes and supports the household's long-term goals

Household Budget Template

Monthly Income			
INCOME		Current	Suggested
Monthly Net Pay (Earner #1)			
Monthly Net Pay (Earner #2)			
Total Monthly Income			
Monthly Expenses			
	EXPENSES	Current	Suggested
HOUSING	Rent or Mortgage		
	Other Housing (tax, insurance)		
FOOD	Groceries		
TRANSPORTATION	Car Payment 1		
	Car Payment 2		
	Car Insurance		
ADDITIONAL MONTHLY BILLS	Utilities		
	Cell Phone		
	(other)		
PERSONAL & HOUSEHOLD	Clothing/Entertainment		
	Charitable Donations		
SCHOOL	Student Loan Payments		
CREDIT CARD	Credit Card Payments		
SAVINGS	Contributions to Savings or Investment Accounts		
	Total Monthly Expenses		
	Monthly Surplus or Shortage		

Comprehensive Financial Plan Template

[Name of Household]

[Date]

Prepared by:

Confidential Financial Planning Document
(Prepared for educational purposes only)

Executive Summary

To: [Client/Household Name]

From: [Student's Name]

Date: [Date of Submission]

Subject: Client Household Financial Plan

[Compose a short paragraph summarizing what the client will find in this financial plan and the timeframe it covers. Briefly mention the household's main goals for education, housing, and retirement; the overall budgeting strategy; and the fact that the plan involves making trade-offs because not all goals can be fully funded at once. For example:

This document presents a comprehensive personal financial plan designed to optimize current income and expenditures, foster disciplined saving habits, and achieve both short-term and long-term financial objectives for the period of _____ to _____. The plan summarizes the client household's current financial position and outlines recommendations related to education, housing, retirement, insurance, debt management, and charitable giving. It highlights key trade-offs the household will need to make to align their monthly budget with their highest-priority goals.]

Client Profile

HOUSEHOLD OVERVIEW

- Household Members: _____
- Employment and Income Sources: _____
- Family Considerations (children, dependents, special circumstances): _____

FINANCIAL GOALS

[List the household's major short- and long-term goals, including time horizons.]

Goal	Category	Time Horizon	Supporting Details

VALUES AND PRIORITIES

[Describe key indicators of household financial values, including spending patterns, saving habits, and current charitable giving.]

RISK TOLERANCE

Overall Risk Tolerance Rating (on a scale of 1–5): _____

Rationale: _____

Current Financial Position

INCOME AND CASH FLOW OVERVIEW

Monthly Net Income	
Monthly Fixed Expenses	
Monthly Variable Expenses	
Monthly Charitable Contributions	
Monthly Savings Contributions	
Monthly Surplus or Shortage	

Cash Flow Summary:

[Summarize how the household's income compares to its overall spending pattern; for example, whether spending is generally aligned with income, areas of concern, or signs of strain or surplus.]

EVALUATION OF SPENDING USING RECOMMENDED GUIDELINES

Category	Current Spending	% of Net Income	Is it within recommended guidelines?
Housing			
Groceries			
Transportation			

Spending Summary:

[Write a short interpretation of what these comparisons suggest about the household's spending behavior.]

DEBT AND REPAYMENT OVERVIEW

Debt Type	Outstanding Balance	Interest Rate	Payback Period (defined or undefined)	Monthly Payment (budget impact)
Total Debt				

Debt Summary:

[Write a summary of how debt and repayment factors may affect the household's ability to achieve its goals; for example, if they have high-interest debt, minimum payments, upcoming payoff dates.]

SAVING AND INVESTMENT BEHAVIOR

Account Type	Balance	Approx. Rate of Return	Notes

Investment Summary:

[Write a brief description of the household's overall investing approach (e.g., conservative, moderate, or aggressive), based on these accounts and behaviors]

NET WORTH STATEMENT

Assets	Amount
Total Assets	
Liabilities	**Amount**
Total Liabilities	
Net Worth (Total Assets – Total Liabilities)	

Net Worth Summary:

[Write a brief description of the household's current assets and liabilities and how these will impact retirement planning.]

Insurance and Risk Management Plan

CURRENT INSURANCE COVERAGE OVERVIEW

Type of Insurance	Who/What Is Covered	Key Coverage Details	Monthly Cost

Insurance Coverage Summary:

[Write a brief narrative summary of the household's insurance posture overall.]

Assessment of Coverage:

[Based on the household's needs, goals, and risk tolerance, identify your professional judgment of the clients' coverage.]

Rating: Adequate, Insufficient, Missing

INSURANCE RECOMMENDATIONS AND BUDGET IMPACT

Recommended Change	Effect on Risk	Estimated Monthly Budget Impact

Insurance Recommendation Summary:

[Explain specific adjustments to coverage that would better align with the household's needs and risk profile. For each recommendation, briefly explain how the change affects the household's exposure to risk and how the change affects their monthly budget.]

FRAUD AND CONSUMER PROTECTION STRATEGY

Recommended Strategy and Rationale:

[Include at least one actionable recommendation the household should adopt to protect itself along with the reason you're recommending it.]

Education Plan

EDUCATION GOAL OVERVIEW

[Summarize the household's education-related goals for their child or children. Include the type of education being considered and the expected timing.]

ESTIMATED COST AND TIME HORIZON

Student/Education Goal	Estimated Total Cost	Years Until Enrollment	Source Used for Estimate

Cost Rationale:

[Write a short explanation of how these estimates were determined.]

POTENTIAL FUNDING SOURCES

Funding Sources:

[Identify several possible sources of funding the household may use to support postsecondary education (e.g., savings, scholarships, grants, student loans, parent contributions, or work-study).]

RECOMMENDED MONTHLY SAVINGS AMOUNT

Recommended Monthly Contribution: _____

Explanation:

[Recommend how much the household should save each month toward the education goal based on the estimated cost and time horizon. Use specific figures from your calculations.]

RECOMMENDED SAVING OR INVESTMENT VEHICLE

Recommended Vehicle and Rationale:

[Identify which type of account is most appropriate for this education goal (e.g., 529 plan, high-yield savings account, and/or CDs). Provide a brief rationale that connects the choice to the household's time horizon and risk tolerance.]

EDUCATION PLANNING SUMMARY

[Summarize how your recommended savings plan and funding approach will help the household progress toward its education goal, given their budget and priorities.]

Housing Plan

HOUSING GOAL OVERVIEW

[Summarize the household's housing goal (e.g., purchasing a first home, upsizing, or relocating) and the intended timeline.]

ESTIMATED HOME COST AND AFFORDABILITY ANALYSIS

Estimated Home Price	Down Payment Required	Interest Rate	Estimated Monthly Payment (including Taxes and insurance)	Calculator/ Source Used

COMPARISON TO CURRENT HOUSING COSTS

- Current Monthly Costs: _____
- Projected Monthly Costs: _____
- Difference: _____

Affordability Summary:

[Write a brief interpretation of what this difference means for the household's budget and ability to pursue other goals.]

UPFRONT COSTS

[Identify the major upfront expenses associated with a potential home purchase that your clients may need to budget for, specifically the down payment and moving expenses.]

HOUSING RECOMMENDATION

[State whether you recommend pursuing the housing goal now, delaying it, or maintaining current housing. Support your recommendation with at least two numerical comparisons (e.g., percentage of net income and current savings vs. required upfront costs).]

HOUSING GOAL SUMMARY

[Summarize your overall conclusion and how it fits with the household's goals and financial capacity.]

Retirement and Charitable Giving Plan

RETIREMENT GOAL OVERVIEW

[Summarize the household's retirement goal, including the desired retirement age and any concerns or limitations noted in the household financial profile.]

RETIREMENT SAVINGS ESTIMATE AND CONTRIBUTION SCENARIOS

Rate of Return Scenario	Required Monthly Contribution
2%	
5%	
8%	
10%	

RECOMMENDED RETIREMENT CONTRIBUTION STRATEGY

Recommended Contribution: _____

Vehicle and Rationale:

[Identify your recommended monthly retirement contribution and the savings or investment vehicles that best fit the household's time horizon and risk tolerance.]

SOCIAL SECURITY RECOMMENDATION

Claiming Age Recommendation: _____

Rationale:

[Recommend an age for claiming Social Security benefits and provide a concise explanation referring to risk, expected longevity, and/or income needs.]

CHARITABLE GIVING RECOMMENDATION

[Review the household's current charitable giving. Recommend whether they should maintain, increase, decrease, or restructure their giving based on their stated values and their available budget after long-term saving decisions.]

RETIREMENT AND GIVING SUMMARY

[Summarize how your retirement and charitable giving recommendations support the household's long-term goals while balancing their current budget constraints.]

Final Recommended Budget

OVERVIEW

[Compose a brief explanation of how your recommended monthly budget aligns the household's income and spending with their highest-priority goals. Highlight the most important changes you made to the budget, why those changes were necessary, and how they will help the household make progress while staying financially stable. If any trade-offs were required, explain them concisely.]

MONTHLY BUDGET SUMMARY

[Expand the table or add subcategories as needed to reflect your clients' full budget.]

Category	Recommended Amount
Income (net monthly)	
Fixed Expenses	
Variable Expenses	
Insurance Premiums	
Charitable Giving	
Education Savings Contribution	
Retirement Savings Contribution	
Debt Payments	
Other Savings	
Remaining Surplus (or shortage)	

Budget Notes and Key Highlights:

[Include a brief explanation of notable changes from the household's current budget (e.g., reallocation of funds from discretionary spending to savings, changes in insurance premiums, impact of increased retirement contributions, and adjustments to charitable giving).]

BUDGET SUMMARY

[Describe how this budget supports the household's long-term goals and why it is realistic given their income and constraints.]

Debt Management Plan

STATUS QUO SUMMARY

[Write a brief description of the household's current repayment trajectory if they make only minimum payments. Examples may highlight estimated time to payoff, total interest paid, any near-term payoffs or expiring loans.]

RECOMMENDED DEBT MANAGEMENT PLAN

[Recommend one clear strategy for managing or accelerating debt repayment; for example, prioritizing highest-interest debt first (avalanche method), paying off smaller balances first for momentum (snowball method), and consolidating high-interest debt if appropriate.]

Recommended Action	Rationale	Estimated Monthly Impact

PROJECTED BENEFITS

[Summarize how your recommended debt strategy improves the household's financial flexibility. You may refer to reduction in total interest paid, earlier payoff of significant debts, freeing funds for education or retirement savings, etc.]

IMPACT AND RATIONALE

[Explain how your recommended debt strategy is likely to affect the household's financial stability, risk, and progress toward long-term goals, noting any important trade-offs.]

Financial Advisor Project Rubric

Rubric Row	Scoring Category	Skills	Scoring Criteria
A	Executive Summary	1.C 4.B	Students must complete the Executive Summary component of the Comprehensive Financial Plan.
B	Client Profile	1.A 1.B	Students must complete the Client Profile component of the Comprehensive Financial Plan, which includes the following elements: ▪ Household overview, including identification of household members, employment and income sources, and family considerations ▪ Description of key short- and long-term household financial goals ▪ Description of household values and priorities, including description of spending patterns, savings habits, and current charitable giving ▪ Description of household risk tolerance, including risk-tolerance rating and rationale
C	Current Financial Position	1.B 1.C 3.A 4.B	Students must complete the Current Financial Position component of the Comprehensive Financial Plan, which includes the following elements: ▪ Identification of current monthly net income, fixed and variable expenses, charitable contributions, savings contributions, and surplus/shortage, as well as a summary of household cash flow and areas of concern ▪ Evaluation of spending using recommended guidelines, including comparisons of key spending categories to guidelines and a summary of the household's current spending behavior ▪ Overview of current debt and repayment status, including identification of current balances, interest rates, payback periods, and monthly payments and a summary of how repayment may affect the household's ability to achieve its goals ▪ Description of savings and investment behavior, including account types, balances, approximate rates of return, and a summary of the household's approach to saving and investing ▪ Net worth statement, including assets and liabilities and a summary of how the household's current net worth may impact retirement planning
D	Insurance and Risk Management Plan	3.A 3.B 3.D	Students must complete the Insurance and Risk Management Plan component of the Comprehensive Financial Plan, which includes the following elements: ▪ Identification of current insurance types, coverage, and monthly cost; summary of current insurance coverage; and evaluation of adequacy of insurance coverage ▪ Insurance recommendation, including a description of each recommended change and its effect on both household risk and the household's monthly budget, and a summary of how changes will affect the household's risk exposure and budget ▪ Fraud and consumer protection recommendation, including at least one step the household should take and a rationale

Rubric Row	Scoring Category	Skills	Scoring Criteria
E	Education Plan	3.A 3.B 3.D	Students must complete the Education Plan component of the Comprehensive Financial Plan, which includes the following elements: ▪ Overview of the household's education-related goals, including identification of each type of educational plan being considered, the estimated total cost, and years until enrollment, as well as sources used to develop the cost estimates and a rationale of how they were developed ▪ Description of potential funding sources that could be used to achieve the household's education goal ▪ Monthly savings recommendation toward the education goal based on estimated cost and time horizon ▪ Description of the recommended saving or investment vehicle, including rationale ▪ Summary of how the savings plan and funding approach will help the household achieve progress toward its education goal
F	Housing Plan	3.A 3.B 3.D	Students must complete the Housing Plan component of the Comprehensive Financial Plan, which includes the following elements: ▪ Overview of the household's housing-related goal, including estimated home price, down payment required, interest rate, and estimated monthly payment, and the calculator or source used to develop the payment estimate ▪ Summary of findings and recommendation regarding the potential home purchase, including a comparison of current housing costs and estimated costs of buying ▪ Identification of additional upfront costs related to a potential home purchase ▪ Recommendation of whether to pursue or defer the housing goal, supported by at least two numerical comparisons ▪ Summary of overall housing recommendation and impact on household goals and financial capacity
G	Retirement and Charitable Giving Plan	3.A 3.B 3.D	Students must complete the Retirement and Charitable Giving Plan component of the Comprehensive Financial Plan, which includes the following elements: ▪ Overview of the household's retirement-related goal, including desired retirement age and any concerns or limitations ▪ Description of retirement savings estimates and contribution scenarios based on various potential rates of return on investments ▪ Monthly savings and investment recommendation toward the retirement goal based on the household's goal, time horizon, and risk tolerance ▪ Identification of the recommended Social Security retirement age and explanation related to risk, expected longevity, and/or income needs ▪ Monthly charitable giving recommendation based on the household's stated values and available funds after long-term saving and investment decisions ▪ Summary of overall retirement and charitable giving recommendations, including explanation of how recommendations support household goals and fit within budget constraints
H	Final Recommended Budget	4.A	Students must complete the Final Recommended Budget component of the Comprehensive Financial Plan, which includes the following elements: ▪ Overview of recommended budget changes and how the recommended budget aligns household income, spending, and saving behavior to highest-priority goals ▪ Monthly budget summary, including net income, expenses (including insurance premiums), charitable giving, specific contributions to education savings and retirement savings, debt payments, and other savings, as well as remaining surplus or shortage ▪ Explanation of notable recommended changes from the household's current budget and summary of how proposed budget supports the household's long-term goals and fits within the budget constraints

Rubric Row	Scoring Category	Skills	Scoring Criteria
I	Debt Management Plan	3.D	Students must complete the Debt Management Plan component of the Comprehensive Financial Plan, which includes the following elements: ▪ Status quo summary of the household's current repayment trajectory, including time to payoff, total interest paid, and any near-term payoffs or expiring loans ▪ Recommended debt-management plan, including at least one strategy for managing or accelerating debt repayment, including rationale and estimated monthly impact ▪ Summary of specific projected benefits of the recommended strategy, such as reduction in total interest paid ▪ Description of the impact of the recommended strategy on the household's financial stability, risk, and progress toward long-term goals, noting any important trade-offs.
J	Professional Presentation (Optional/Local)	4.B	Students deliver a 3–5 minute presentation summarizing their Comprehensive Financial Plan. Deliverables: Oral Presentation or Recorded Pitch (if required).

AP BUSINESS WITH
PERSONAL FINANCE



Exam Information

Exam Overview

The AP Business with Personal Finance Exam assesses student understanding of the skills and learning objectives outlined in the course framework. The exam is 2 hours and 40 minutes long and includes 60 multiple-choice questions and 4 free-response questions, one of which is an exam-day validation question about the student's Business Canvas Project. The details of the exam, including exam weighting and timing, can be found below:

Section	Question Type	Number of Questions	Exam Weighting	Timing
I	**Multiple-choice questions**	**60**	**60%**	**70 minutes**
II	**Free-response questions**	**4**	**40%**	**90 minutes**
IIA	Question 1: Business Canvas Project Exam-Day Validation	1	15%	25 minutes
IIB	Question 2: Personal Finance	1	5%	65 minutes
	Question 3: Business Concept Application	1	5%	
	Question 4: Business Decision	1	15%	

How Student Learning Is Assessed on the AP Exam

Section I: Multiple-Choice

The multiple-choice section of the AP Business with Personal Finance Exam includes set-based questions. Units 1–4 of the course are assessed with the following exam weighting:

Units of Instruction	Exam Weighting
Unit 1: Businesses, Competition, and New Ideas	20-30%
Unit 2: Marketing	20-30%
Unit 3 – Part 1: Personal Saving and Borrowing **Unit 3 – Part 2:** Business Finance and Accounting	25-35%
Unit 4: Management and Strategy	15-20%

These ranges are inclusive of 12–15 items assessing personal finance topics throughout Units 1–4, comprising 20–25% of exam weight.

Skill Categories 1–4 are assessed in the multiple-choice section of the AP Exam with the following exam weighting:

Skills	Exam Weighting
Skill 1: Concept Application	45–55%
Skill 2: Entrepreneurship	5–15%
Skill 3: Decision Making	25–35%
Skill 4: Communication	5–15%

Section II: Free-Response

The free-response section of the AP Exam includes four free-response questions, comprised of one Business Canvas Project Exam-Day Validation Question, one personal finance question, one business concept application question, and one business decision question. The free-response questions assess the content in Units 1–4 and Skill Categories 1–4.

Free-Response Question 1: Business Canvas Project Exam-Day Validation will present students with the opportunity to respond in writing to questions about the execution of their Business Canvas Project*. Students will be asked to pitch their product idea, explain how they used hypothesis testing to inform a decision**, and explain why a challenge that is frequently faced by entrepreneurs may represent a challenge to the viability of their product idea. Students will have 25 minutes to complete this question. Skill Categories 1, 2, and 4 are assessed.

Free-Response Question 2: Personal Finance will provide students with a scenario that describes a fictional individual's or household's financial situation, including quantitative data and goals, and will assess students' ability to interpret the data and explain how the individual or household could achieve their financial goals. The suggested time for this question is 12–13 minutes. Skill Categories 1 and 3 are assessed.

Free-Response Question 3: Business Concept Application will provide students with a scenario that describes a fictional business that is gathering evidence to inform strategic planning, and will assess students' ability to interpret business data and explain how the business could achieve its goals. The suggested time for this question is 12–13 minutes. Skill Category 1 is assessed.

Free-Response Question 4: Business Decision will provide students with a scenario that describes a fictional business facing an opportunity or problem. The situation requires the business to choose between two alternative courses of action, which are defined in the scenario in terms of their financial and nonfinancial implications. The question assesses students' ability to establish decision-making criteria and use them to compare the two courses of action, as well as students' ability to make and support a recommendation using reasoning and evidence from the scenario. It is recommended that students take approximately 40 minutes, including a 15-minute reading period, to complete this question. Skill Category 3 is assessed.

* See the Business Canvas Project Guide for a full description of the project requirements.
**See page 147 in the Business Canvas Project Guide for a list of project deliverables requiring hypothesis testing.

Task Verbs Used in Free-Response Questions

The following **task verbs** are commonly used in free-response questions:

Compare: Provide a description of similarities and/or differences.

Describe: Provide the relevant characteristics of a specific topic or concept.

Explain: Provide information about how or why a relationship, process, pattern, position, situation, or outcome occurs, using evidence and/or reasoning to support or qualify a claim.

- Explain "how" typically requires analyzing the relationship, process, pattern, position, situation, or outcome;
- Explain "why" typically requires analysis of motivations or reasons for the relationship, process, pattern, position, situation, or outcome.

Identify: Indicate or provide information about a specified topic, without elaboration or explanation.

Pitch: Describe the product, the target customer, the problem, need, or want the product is intended to address; and explain how the product creates value for customers.

Recommend: Articulate a course of action and support it with evidence.

Sample Exam Questions

The sample exam questions that follow illustrate the relationship between the course framework and the AP Business with Personal Finance Exam and serve as examples of the types of questions that appear on the exam. After the sample questions are tables that show which skill(s), learning objective(s), and essential knowledge statement(s) each question assesses. The multiple-choice question alignment table also provides answer keys to the questions.

Section I: Multiple-Choice Questions

The following are examples of the kinds of multiple-choice questions found on the exam.

Questions 1 through 4 refer to the following.

Edi's Electronics Shop is a retail store that sells electronic products to meet the computing needs of individual and business customers in its community. To serve its customers, Edi's carries two major product lines:

- devices such as smartphones, computers, and tablets
- accessories such as gaming headsets, large external monitors, and protective cases

Edi's requires sales staff to undergo extensive training so they can provide expert product guidance, which customers report as a key reason they continue to shop at Edi's.

Edi's uses the shop's sales data, findings from customer surveys, and market trends reported in industry publications to select the store's product inventory. Inventory is ordered from a large electronics wholesaler that also serves many of Edi's competitors.

With the goal of improving the business's viability, Edi's management recently conducted a SWOT analysis. This SWOT analysis was informed by a customer survey. Results from the survey are shown in Figures 1 and 2.

FIGURE 1. Percent of Edi's Customers by Customer Type

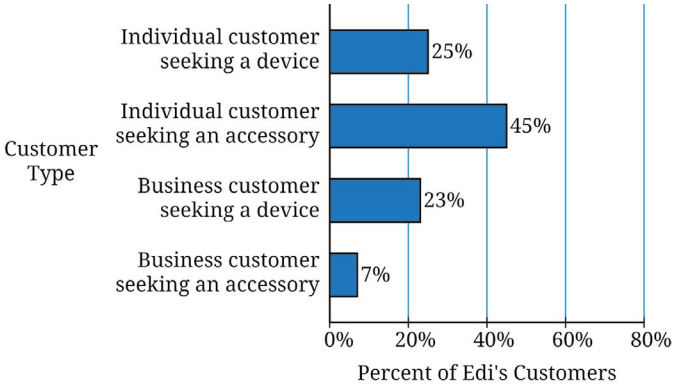
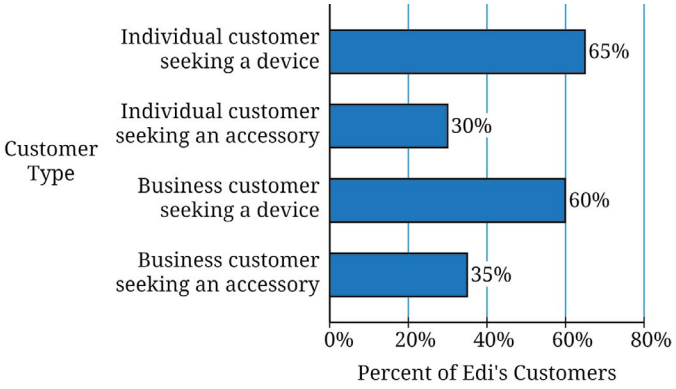


FIGURE 2. Percent of Edi's Customers Responding "Yes" to the Question: "Does Edi's Carry the Product You Were Looking for Today?"



1. Which of the following conclusions is supported by the data represented in the figures?
   (A) 25% of Edi's customers are individual customers.
   (B) 45% of Edi's customers are seeking an accessory.
   (C) 60% of Edi's business customers who are seeking a device find what they want.
   (D) 65% of Edi's individual customers who are seeking an accessory find what they want.

2. Which of the following statements best describes a market opportunity revealed by the results of the customer survey?
   (A) There is unmet customer demand for expert product knowledge among individual and business customers.
   (B) There is unmet customer demand for accessories among individual and business customers.
   (C) There are no electronic product wholesalers meeting business customer accessory needs.
   (D) There are no electronic product retailers meeting individual customer device needs.

3. Edi's SWOT analysis is most likely to reveal which of the following findings about the shop's viability?
   (A) It is improved by its focus on one major product line.
   (B) It is improved by its extensively trained and highly skilled employees.
   (C) It is reduced by Edi's use of primary- and secondary-source market research.
   (D) It is reduced by Edi's decision to use indirect distribution channels.

4. Which of the following criteria would Edi's be most likely to use when deciding which products to sell next year, given its business goal?

   (A) The shop's projected total annual sales

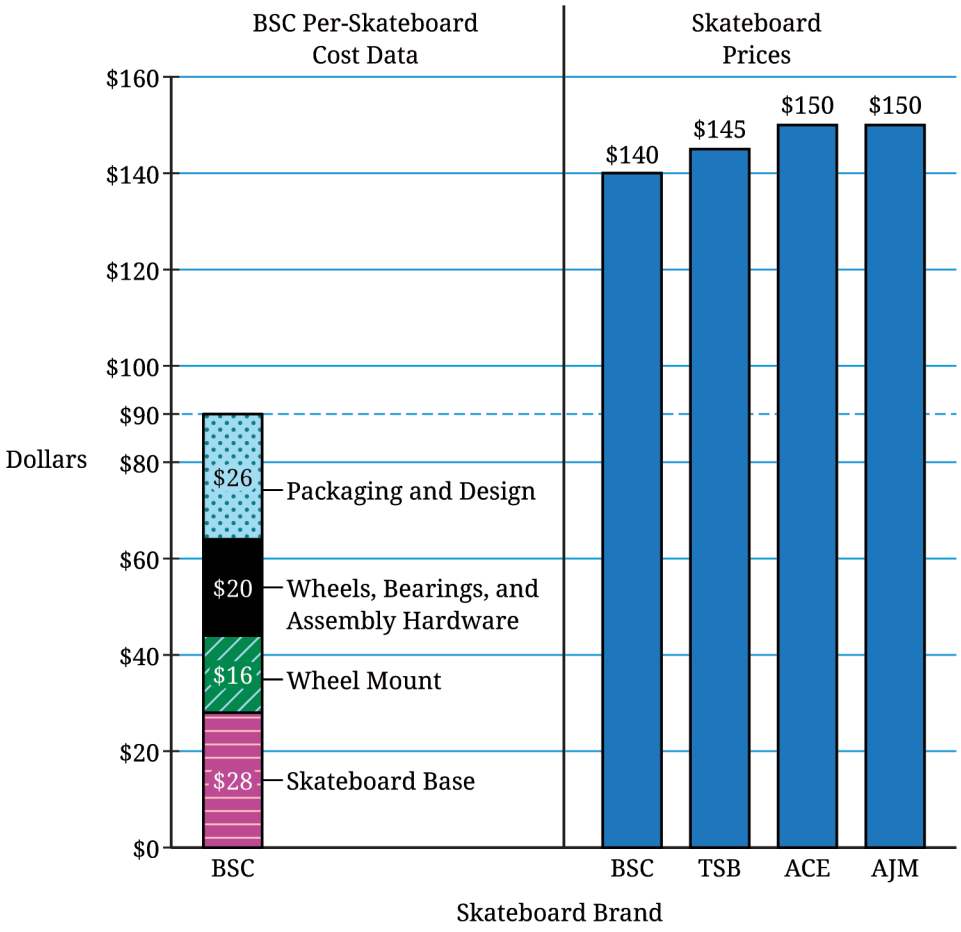
   (B) The shop's projected customer acquisition cost

   (C) The projected per-unit profit on each of the shop's products

   (D) The projected wholesale price of each of the shop's products

Questions 5 through 8 refer to the following.

Bridger Skate Company (BSC) is a skateboard manufacturing startup that is planning a market entry strategy using the data in the figure. BSC manufactures the skateboard base and then assembles the finished product using inputs such as wheels, wheel mounts, bearings, and assembly hardware. These inputs are supplied exclusively to BSC by manufacturers known for producing the highest-quality skateboard inputs. BSC believes its boards will outperform all rivals in terms of quality, but to grow market share quickly, its initial price of $140 will be lower than the price it plans to use once its market share goal is achieved.



5. Which of the following pricing strategies is BSC most likely to use when it enters the market, given its initial price and goal?
   (A) Price gouging
   (B) Price collusion
   (C) Penetration pricing
   (D) Cost-based pricing

6. Which of the following conclusions is supported by the data in the figure?
   (A) The per-unit cost of a BSC skateboard is $60 less than the per-unit cost of an ACE skateboard.
   (B) The per-unit cost of a BSC skateboard is $5 less than the per-unit cost of a TSB skateboard.
   (C) At its initial price, BSC will generate revenue of $90 per skateboard.
   (D) At its initial price, BSC will earn a profit of $50 per skateboard.

7. Which of the following BSC departments most likely generated the market research data on rivals' prices shown in the figure?
   (A) The finance department
   (B) The operations department
   (C) The human resources department
   (D) The sales and marketing department

8. Which of the following best explains why BSC would enter into exclusive supplier agreements with makers of high-quality skateboard inputs?
   (A) To change its ownership structure to a partnership
   (B) To increase customer switching costs in the market
   (C) To strengthen its position as a monopoly in the industry
   (D) To achieve competitive advantage by creating a barrier to entry

Questions 9 through 12 refer to the following.

Chemical Distributors is a United States–based wholesale distributor that sells and delivers chemicals to industrial clients around the globe. Each year this publicly held corporation prepares financial statements—including a comparative income statement like the one shown in the figure—for internal and external stakeholders.

Chemical Distributors, Inc. Comparative Income Statement (in thousands of dollars)		
	2021	2022
1. Revenue	$ 100,000	$ 120,000
2. Cost of Goods Sold	$ (50,000)	$ (54,000)
3. Gross Profit	$ 50,000	$ 66,000
4. Operating Expenses	$ (35,000)	$ (40,000)
5. Line 5	$ 15,000	$ 26,000
6. Taxes	$ (2,000)	$ (8,000)
7. Line 7	$ 13,000	$ 18,000

9. Which income statement category does Line 7 in the figure represent?
   (A) Operating profit
   (B) Retained earnings
   (C) Net profit
   (D) Interest expense

10. According to the data in the figure, what was the business's gross profit margin in 2021?
   (A) 13%
   (B) 15%
   (C) 26%
   (D) 50%

11. An investor would most likely feel confident in the accuracy of this income statement for which of the following reasons?
   (A) When a business operates globally, financial managers have no incentive to falsify financial statements.
   (B) When a business is owned by shareholders, financial statements are produced by managerial accountants.
   (C) United States government regulations require corporations to have their financial statements reviewed by independent auditors.
   (D) United States government regulations require wholesalers to develop codes of conduct to prevent falsified financial statements.

12. Which of the following most likely explains the increase in operating expenses from 2021 to 2022?
   (A) The business paid dividends to its shareholders.
   (B) The business hired additional sales and marketing staff.
   (C) The business received a subsidy from the government.
   (D) The business paid lower rent on its office space.

Questions 13 through 16 refer to the following.

Job Posting: Entry-Level Farmworker

About Us: Green Acres Wheat Farm is a family-owned operation located in the Sunny River Valley. For five generations, the Bailey family has been committed to producing high-quality wheat flour for local restaurants and regional food producers and remains dedicated to maintaining soil health and the quality of its crops.

Job Responsibilities:

- Assist with planting, cultivating, harvesting, and milling of wheat
- Operate and maintain farm machinery and equipment
- Perform general farm maintenance tasks, including fencing, irrigation, and repairs

Required Qualifications:

- Basic knowledge of farming practices and machinery operation
- Strong work ethic and willingness to learn
- Ability to work independently and as part of a team

Wage: $15 per hour

Employee Benefits:

- Health insurance coverage
- Paid time off (PTO) and holidays
- On-the-job training and opportunities for skill development
- Employee discounts on farm produce
- Flexible work hours and scheduling

13. Which of the following core competencies would be most valuable for an individual pursuing an entry-level farmworker position at Green Acres Wheat Farm?
    (A) Training skills
    (B) Mechanical skills
    (C) Financial management skills
    (D) Marketing and sales skills

14. Which of the following best explains why Green Acres Wheat Farm provides on-the-job training for employees in the entry-level farmworker role?
    (A) To prevent them from making mistakes that may lead to flawed products and increased costs
    (B) To prevent them from choosing traditional advertising tools that may damage the farm's reputation
    (C) To prevent them from purchasing unnecessary production inputs that may result in higher direct costs
    (D) To prevent them from using cheaper resource suppliers that may result in a loss of competitive advantage

15. Based on the job description, which of the following statements best describes a tactic Green Acres Wheat Farm uses to motivate and retain its entry-level farmworkers?

    (A) It compensates them with bonuses.

    (B) It provides them with piece rate pay.

    (C) It offers them flexible work hours and scheduling.

    (D) It promotes the five-generation history of the business.

16. Which of the following applicants is Green Acres Wheat Farm most likely to hire, given the required qualifications listed in the job description?

    (A) Applicant 1, whose work history includes part-time work designing and hand painting T-shirts sold at local farmer's markets

    (B) Applicant 2, whose work history includes part-time work as a server at a restaurant that features local produce on its menu

    (C) Applicant 3, whose work history includes summer work on a neighbor's farm, helping with corn harvesting and fence maintenance

    (D) Applicant 4, whose work history includes summer work at their family's accounting firm, entering financial data into spreadsheets

Section IIA: Business Canvas Project Exam-Day Validation Question

The following is an example of the kind of exam day validation question found on the exam.

Question 1: Business Canvas Project Exam-Day Validation

(A) **Pitch** your Business Canvas Project product.

In your response you should include the following:

- a brief description of your product
- your target customer profile
- the problem, need, or want your product is intended to address
- how or why your product creates value for customers

(B) Businesses typically formulate and test hypotheses related to pricing strategies.

Describe one reason a business would use a cost-based pricing strategy.

(C) **Explain** how you tested a hypothesis about your pricing strategy in your Business Canvas Project.

In your response you should include the following:

- your hypothesis
- a research method you used
- the evidence you collected
- how the evidence shaped your decision making

(D) Access to external financial capital may be a problem for entrepreneurs with a new idea.

i. **Describe** a purpose of external financial capital in business.

ii. **Explain** why access to external financial capital does or does not represent a challenge to the viability of your Business Canvas Project product idea. Your response should include evidence that supports your explanation.

Section IIB: Free-Response Questions

The following are examples of the kinds of free-response questions found on the exam.

Question 2: Personal Finance

Throughout college, Audrey was careful with the money she earned as a restaurant server. After college, she was hired as a marketing associate at an annual salary of $68,000. With a combination of her savings and borrowing, Audrey purchased a two-year-old car, moved into and furnished a new apartment, and bought professional clothes.

Now, each month after Audrey pays her planned expenses, including her car and student loan payments, she has $785 left over that she can put toward debt repayment and savings. She wants to pay off all her debts as quickly as possible.

Audrey also wants to start saving for retirement and take full advantage of the retirement savings program offered by her employer, for which she is now eligible. For every 1% of her salary that Audrey saves through this program, her monthly net pay will decrease by about $50, but her retirement savings will increase by $113, due to reduced taxes plus the employer contribution. If she contributes 10% of her salary, her employer's matching contribution would be worth $6,800 in additional savings a year.

A list of Audrey's assets and liabilities is shown in the figure.

Audrey's Assets and Liabilities

Assets	Market Value/ Account Balance as of June 30
Two-year-old car	$ 35,000
Furniture	$ 2,000
Savings account balance	$ 2,300
Individual retirement account balance	$ 0
Liabilities	
Student loan balance (5.9% interest rate)	$ 50,000
Car loan balance (4.5% interest rate)	$ 30,000
Credit card balance (18.9% interest rate)	$ 2,500
Furniture store credit card balance (23% interest rate)	$ 5,000

2. Respond to parts A, B, and C.

Audrey has come to you, a financial advisor, for guidance regarding her financial situation.

(A) Using data from the scenario, **identify** a difference between Audrey's total assets and her total liabilities.

(B) **Describe** a financial challenge or opportunity indicated in the scenario that is currently impacting Audrey's ability to achieve her financial goals.

(C) **Explain** how a specific action taken by Audrey could help her achieve one of her financial goals.

Question 3: Business Concept Application

CableFusion—a large media company that produces movies, TV shows, and news programs—wants to enter the streaming-service market. Streaming services allow customers to watch content on demand, over the internet. Subscribers to CableFusion Plus, the company's streaming-service product, will have full access to all of CableFusion's movies, TV shows, and news for one monthly fee.

The streaming-service market is characterized by intense competition among five major companies, with the top three controlling 86% of market share, by revenue. Although their streaming services are very similar, VistaFlix has a vast collection of movies, OrbioTV features live TV shows, and Vistify is known for its great customer service.

CableFusion's marketing and finance executives have been tasked with developing a competitive advantage strategy to attract customers and gain market share for the new product. They consulted websites and publications on the streaming-service industry and reviewed publicly available financial statements of the five existing streaming services. Figure 1 shows the market share, by revenue, for each potential rival. Figure 2 shows the monthly subscription fee for basic service (with ads) and premium service (no ads) for each potential rival.

FIGURE 1. Streaming-Service Market Share, by Revenue

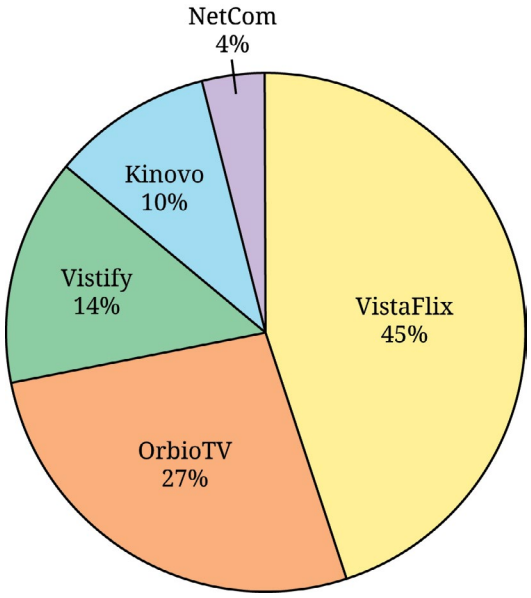
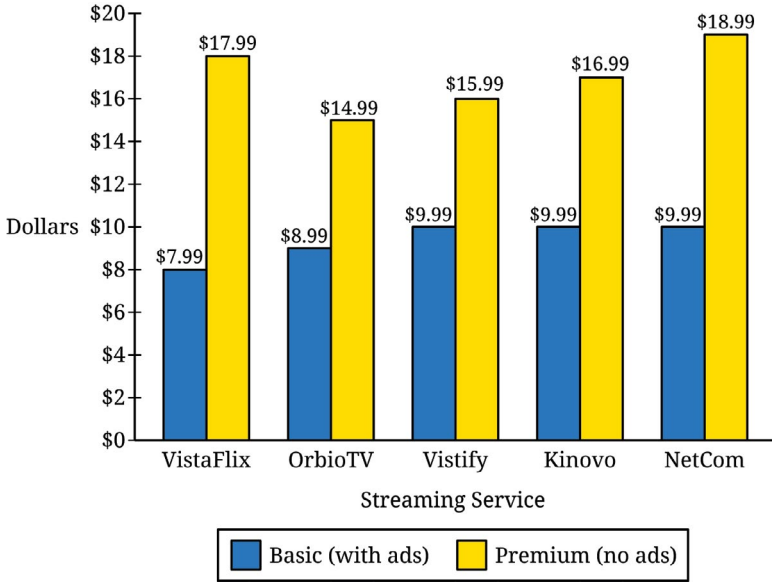


FIGURE 2. Monthly Subscription Fees for Basic and Premium Services



3. Respond to parts A, B, and C.
   (A) **Describe** a market research method CableFusion executives employed to gather the information represented in the scenario.
   (B) **Describe** a finding revealed by the research.
   (C) **Explain** how CableFusion could use a finding from the research to achieve a business goal.

Question 4: Business Decision

You have been retained as a consultant to help the business described in the scenario decide between two alternative courses of action.

Background

Heritage Textiles (HT) is a small carpet manufacturer in Whittsville, Georgia. The current CEO is HT's owner, Catherine Whitt, who has deep family connections to Whittsville. Local legend says that her great-grandmother handwove the first cotton carpet produced in Whittsville in the late 1800s. Whitt's grandfather founded HT in 1920, and the business has operated in Whittsville for over 100 years.

Five years ago, HT began the search for a new location. Its existing production plant and operations facility was near capacity with no room to expand, and residents in a new housing development nearby had begun to complain that microscopic textile particles from HT's production process were being released into the air and causing respiratory problems. HT surveyed its employees and asked what they would do if HT moved to a location more than 35 miles from Whittsville. Of HT's 120 employees, 20% (24/120) said they would move with the company or commute, and 80% (96/120) said they would look for a new job.

The survey results indicated HT's new facility should be located in the Whittsville area. However, Dalton, Georgia—a town located 45 miles from Whittsville—was also considered because of its role in HT's supply chain. HT relies on the dyes and other carpet inputs produced in Dalton as well as the many textile warehouses there, which HT uses to store its inventory. HT's sizeable transportation costs would be nearly eliminated if the company relocated to Dalton. With over 150 carpet plants, numerous textile input suppliers, and a well-developed carpet and textile distribution network, Dalton—known as the "Carpet Capital of the World"—was an attractive option.

When a recession hit, the search for a new site was abandoned. The economic downturn led to three years of declining sales for HT and the closing or bankruptcy of many of HT's direct competitors—other niche carpet producers that served the southeastern United States. Recently, however, HT's performance has improved. Sales are up 15% this year and total sales hit the $5 million mark for the first time. As production has rebounded, so have complaints from HT's neighbors.

With no room to expand and a deteriorating relationship with the community, HT is once again in search of a new facility. According to Whitt, a 20,000-square-foot facility would increase production capacity by 50%. Whitt projects that orders for HT carpets will increase by an additional 25% over the next two years and that demand will remain at the level for at least another five years.

Whitt wonders if employees' willingness to relocate, as expressed in the survey results five years ago, might have changed since the recession. Nevertheless, her family connections to Whittsville, the highly skilled and loyal workers who produce HT's cotton-weave carpets, and the business's long history in the community make the prospect of leaving difficult. After a comprehensive search, Whitt has narrowed the relocation options to the following two courses of action.

Whittsville Proposal—New Facility in Whittsville

The first relocation option is to build a new 25,000-square-foot facility on the outskirts of Whittsville, four miles north of HT's current plant. The property is zoned for industrial use and is big enough to allow HT to custom build a facility to house its production and office operations. The construction estimate guarantees the facility will be ready for operation in 18 months.

Dalton Proposal—Renovated Facility in Dalton

The second relocation option is a 30,000-square-foot facility in Dalton that was formerly an auto parts plant. The facility was professionally inspected and found to be in good condition. A rough estimate of the cost to renovate the plant into a carpet-manufacturing facility, prepared by a construction contractor after a site visit, also guarantees an 18-month construction timeline.

Financial Analysis

Whitt has prepared summaries to capture the financial implications of each relocation option (Figures 1 and 2). Her projections reveal that the increased production and sales associated with a bigger facility will increase HT's profits and generate an annual return on investment (ROI) of 20% for the Whittsville option or 25% for the Dalton option. HT has $700,000 in cash to contribute to the one-time relocation costs, which means the business would need to secure a loan or issue stock to raise additional financial capital. To fund the remaining relocation costs, HT would need to raise an additional $1,300,000 if it chose the Whittsville proposal and an additional $1,900,000 if it chose the Dalton proposal.

Heritage Textiles Statement of Profit and Loss Current year ended December 31 and Projections for Year 1 at a new plant in Whittsville or renovated plant in Dalton			
	Current Year Existing Plant	**Whittsville Proposal**	**Dalton Proposal**
Sales Revenue	$ 5,000,000	$ 6,250,000	$ 6,250,000
Cost of Goods Sold			
Resource costs: natural, human, and physical	$ 4,000,000	$ 4,800,000	$ 4,800,000
Transportation costs	$ 200,000	$ 250,000	$ 0
Total Cost of Goods Sold (COGS)	$ (4,200,000)	$ (5,050,000)	$ (4,800,000)
Gross Profit	$ 800,000	$ 1,200,000	$ 1,450,000
Operating Expenses	$ (500,000)	$ (500,000)	$ (500,000)
Net Profit before interest and taxes	$ 300,000	$ 700,000	$ 950,000

Projected increase in sales revenue (both locations) = 25%
Projected increase in resource costs (both locations) = 20%
Projected increase in transportation costs (Whittsville only) = 25%

Heritage Textiles One-Time Relocation Costs		
	Whittsville Proposal	**Dalton Proposal**
One-Time Costs		
Land	$ 550,000	$ 1,250,000
Plant construction	$ 1,000,000	$ 0
Building improvements on existing plant	$ 0	$ 610,000
Legal fees	$ 35,000	$ 35,000
New equipment purchase for increased production	$ 370,000	$ 370,000
Cost of relocating existing production and operations equipment	$ 45,000	$ 90,000
Severance pay for employees who leave HT due to move	$ 0	$ 175,000
Cost of recruiting and training new employees	$ 0	$ 70,000
Total One-Time Costs	**$ 2,000,000**	**$ 2,600,000**

4. Respond to Parts A, B, and C.

   (A) Heritage Textiles is a small carpet manufacturer that has a decision to make. Like all businesses, Heritage Textiles is affected by internal, market, and external factors that have an impact on its ability to achieve its goals.

   i. **Describe** an internal, a market, or an external factor indicated in the scenario that affects Heritage Textiles.

   ii. **Explain** how the factor you selected in part A (i) creates an opportunity or a problem for Heritage Textiles.

(B) There are several financial and nonfinancial criteria that can be used to compare the Whittsville and Dalton proposals.

i. Using projected annual return on investment as a criterion, **describe** a difference or similarity between the two courses of action. Include specific evidence related to each course of action in your response.

ii. Using one additional financial criterion relevant to the decision, **describe** a difference or similarity between the two courses of action. Include specific evidence related to each course of action in your response.

iii. Using one nonfinancial criterion relevant to the decision, **describe** a difference or similarity between the two courses of action. Include specific evidence related to each course of action in your response.

(C) Recommend a course of action for Heritage Textiles.

In your response you should do the following:

- **Recommend** one of the two courses of action in the scenario.
- **Explain** why you recommend that course of action.
- **Support** your recommendation using any three specific criteria, which may include the specific financial and nonfinancial criteria from part B or other specific financial and nonfinancial criteria. Include evidence from the scenario related to each criterion you use.

Answer Key and Question Alignment to Course Framework

Multiple-Choice Question	Answer	Skill	Learning Objective	Essential Knowledge
1	C	1.B	2.3.D*	2.3.D.3*
2	B	2.A	2.3.B	2.3.B.1
3	B	2.C	4.4.D	4.4.D.1
4	C	3.C	4.3.B	4.3.B.3
5	C	1.B	2.5.A	2.5.A.6
6	D	1.B	2.5.A	2.5.A.5
7	D	1.A	1.7.D	1.7.D.1
8	D	1.C	1.8.C	1.8.C.3
9	C	1.A	3.6.A	3.6.A.9
10	D	1.B	3.6.B	3.6.B.2
11	C	1.C	3.9.B	3.9.B.2
12	B	1.B	3.6.A	3.6.A.5
13	B	1.A	1.5.A	1.5.A.5
14	A	1.C	4.1.C	4.1.C.3
15	C	1.C	4.1.D	4.1.D.5
16	C	3.C	4.1.C	4.1.C.2

*Skills-focused question. The Learning Objective and Essential Knowledge correspond to the content presented in the scenario.

Free-Response Question	Question Type	Skills	Learning Objectives
1	Business Canvas Project Exam-Day Validation Question	1.A, 1.C, 2.B, 2.C, 4.B	1.1.A, 1.1.B, 1.4.C, 2.1.B, 2.3.B, 2.3.C, 2.5.A, 2.7.A, 3.5.A, 3.5.D, 4.3.B
2	Personal Finance Question	1.B, 3.A, 3.B	3.1.A, 3.1.B, 3.1.C, 3.7.C, 4.1.D
3	Business Concept Application Question	1.A, 1.B, 1.C	1.2.B, 1.7.D, 2.3.B, 2.3.D, 2.4.A, 2.5.A
4	Business Decision Question	3.A, 3.C, 3.D	4.3.B, 4.4.C, 4.4.D

AP BUSINESS WITH PERSONAL FINANCE

Scoring Guidelines

Question 1: Business Canvas Project Exam-Day Validation — 10 points

(A) **Pitch** your Business Canvas Project product.

In your response you should include the following:

- a brief description of your product
- your target customer profile
- the problem, need, or want your product is intended to address
- how or why your product creates value for customers

(B) Businesses typically formulate and test hypotheses related to pricing strategies.

Describe one reason a business would use a cost-based pricing strategy.

(C) **Explain** how you tested a hypothesis about your pricing strategy in your Business Canvas Project.

In your response you should include the following:

- your hypothesis
- a research method you used
- the evidence you collected
- how the evidence shaped your decision making

(D) Access to external financial capital may be a problem for entrepreneurs with a new idea.

i. **Describe** a purpose of external financial capital in business.

ii. **Explain** why access to external financial capital does or does not represent a challenge to the viability of your Business Canvas Project product idea. Your response should include evidence that supports your explanation.

Scoring Guidelines for Question 1: Business Canvas Project Exam-Day Validation — 10 points

Reporting Category	Scoring Criteria	
Part A **Pitch: Target Customer** **(0–1 points)** **Row 1**	**0 points** Does not include a target customer profile.	**1 point** Includes a target customer profile.
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: ▪ Provide no response to the prompt. ▪ Provide no specific demographic or psychographic characteristics to define the customer the product is intended to serve.	**Responses that earn this point:** ▪ Provide at least one specific demographic or psychographic characteristic to define the customer the product is intended to serve.
	Examples that do not earn this point: **Provide no specific demographic or psychographic characteristics** ▪ "Glowra is a portable LED desk lamp with adjustable color settings that makes studying easier for everyone at any time of the day or night." ▪ "Do you want to try a crunchy granola-cluster snack packed with protein and chocolate for a sweet long-lasting energy boost? Try NutriCrisp."	**Examples that earn this point:** ▪ "I created an app that helps high school and college students keep track of homework assignments." ▪ "My business is a lawn care business that provides mowing, leaf-blowing, and trimming services for anyone in my neighborhood with a yard who wants to keep it looking nice."

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="5">Part A
Pitch: Market Opportunity
(0–1 points)
Row 2</td><td>0 points
Does not include the problem, need, or want the product is intended to address.</td><td>1 point
Includes the problem, need, or want the product is intended to address.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide a reference to the product or to the intended customer, rather than to the problem, need, or want the product is intended to address.</td><td>Responses that earn this point:
Provide a reference to the specific customer problem, need, or want the product is intended to address.</td></tr>
<tr><td>Examples that do not earn this point:
Refer only to the product or the customer
“Our new electric bikes have longer-lasting batteries than all others.”
“My product is a personalized phone case for every cell phone user who wants a cell phone case.”</td><td>Examples that earn this point:
“My product is for people who want to express their personalities.”
“Over 60% of students surveyed said they had forgotten at least one assignment in the past month, and almost half agreed or strongly agreed with the statement, ‘an easy-to-use homework tracking app would help me improve my time management skills.’”</td></tr>
</table>

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="4">Part A
Pitch: Value Creation
(0–1 points)
Row 3</td><td>0 points
Does not include an explanation of how or why the described product creates value for customers.</td><td>1 point
Includes an explanation of how or why the described product creates value for customers.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide no description of the product.
Provide a description of the product without explaining how it addresses a customer problem, need, or want.</td><td>Responses that earn this point:
Provide a description of the product and an explanation of how or why it creates value by addressing a customer problem, need, or want.</td></tr>
<tr><td>Examples that do not earn this point:
Provide no description of the product
“Our service is reliable and known for being a great value to customers.”
“With the help of a food scientist and a nutritionist we developed a sweet, protein-rich combination of healthy ingredients.”
Describe the product without explaining how it creates value for customers
“Our new electric bikes are powered by the latest battery technology.”
“My personalized phone cases are very popular with my target customers.”</td><td>Examples that earn this point:
“Our customers wanted a great-tasting snack with no added sugar, which NutriCrisp—a handy, no mess, granola and chocolate snack treat—provides because the ingredients are all natural and do not contain added sugar.”
“Our unique, flexible design and multicolored LED bulbs meet customers’ needs for more comfortable reading light in any environment.”
“We’re the only local babysitting service with 100% of our babysitters CPR and emergency first aid certified, which addresses the desire for safety-trained, child-care providers among our target customers.”</td></tr>
</table>

Reporting Category	Scoring Criteria	
Part B **Business Reason** **(0–1 points)** **Row 4**	**0 points** Does not describe a reason a business would use a cost-based pricing strategy.	**1 point** Describes one reason a business would use a cost-based pricing strategy.
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: ▪ Provide no response to the prompt. ▪ Provide a definition or description of cost-based pricing rather than a specific reason a business would use cost-based pricing. ▪ Provide a description of a general business goal or objective, rather than a specific reason for developing a cost-based pricing strategy.	**Responses that earn this point:** ▪ Provide a description of a specific reason a business would use a cost-based pricing strategy: ◆ To achieve a desired per-unit profit or gross profit margin ◆ To justify their price by illustrating to customers how much it costs to produce their product ◆ To generate predictable profit or profit margins
	Examples that do not earn this point: **Provide only a definition or description** ▪ "When businesses use cost-based pricing, they set the price above the per-unit cost by a set amount." ▪ "Businesses develop a cost-based pricing strategy because they have clearly defined costs that can be communicated to customers." **Provide only a general goal or objective** ▪ "Business develop cost-based pricing when they want to increase their profits." ▪ "One reason a business would develop a cost-based pricing strategy is to determine how much to charge for its product."	**Examples that earn this point:** ▪ "A business may use cost-based pricing to achieve a desired gross profit margin." ▪ "A business might use cost-based pricing when it wants to earn as much profit as possible but doesn't have the customer information needed to use a value-based pricing strategy, or the market information needed to use penetration pricing or a competitive pricing strategy." ▪ "A business might use cost-based pricing when it has clearly defined per-unit costs that can be clearly communicated to customers, so they can see how much of the price is profit for the business and how much goes to producing the product." ▪ "One reason a business would use a cost-based pricing strategy is to earn a set amount of profit on each product sold, which would be the difference between the price and the per-unit cost."

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="4">Part C
Hypothesis
(0–1 points)
Row 5</td><td>0 points
Does not include the hypothesis that was tested.</td><td>1 point
Includes the hypothesis that was tested.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide no reference to a question or statement of assumption related to a specific pricing strategy for the product.
Provide a hypothesis that is unrelated to the pricing strategy for the product.</td><td>Responses that earn this point:
Provide a reference to the pricing-strategy hypothesis that was tested.</td></tr>
<tr><td>Examples that do not earn this point:
Provide no reference to a statement of assumption
“What are the prices charged by my competitors?”
“I offered my phone cases at four different price points.”
Provide a hypothesis unrelated to a specific pricing strategy
“If we set the right price, we will maximize revenue and profit.”</td><td>Examples that earn this point:
“My initial hypothesis was that if I charge a price of $25.00 per lamp, I will sell 10 lamps per month.”
“I tested my assumption that customers would be willing to pay more for customizable phone cases than for generic phone cases.”
“The hypothesis we tested was, ‘If we use cost-based pricing, will we be able to attract customers away from competitors?’”</td></tr>
</table>

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="5">Part C
Research Method
(0–1 points)
Row 6</td><td>0 points
Does not include a research method used.</td><td>1 point
Includes a research method used.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide a description of evidence without naming a research method.</td><td>Responses that earn this point:
Include a specific primary-source research method, such as A/B testing, customer interviews, surveys or focus groups, experiments, or observations.
Include a specific secondary-source research method, such as market research collected from industry-specific or market research websites, government publications, academic sources, or industry publications.</td></tr>
<tr><td>Examples that do not earn this point:
Describe evidence without naming a research method
“I learned that 75% of 300 customers were willing to pay $0.25.”</td><td>Examples that earn this point:
“We surveyed 300 students.”
“I A/B tested websites with two different prices—on one website the product price was $20.00 and on the other website the product price was $19.99.”</td></tr>
<tr><td colspan="2">Additional Notes:
Students do not need to classify or categorize their research method as primary source or secondary source to earn this point.</td></tr>
</table>

Reporting Category	Scoring Criteria	
Part C **Evidence** **(0–1 points)** **Row 7**	**0 points** Does not include the evidence collected.	**1 point** Includes the evidence collected.
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: ▪ Provide no response to the prompt. ▪ Provide no reference to a specific finding or piece of evidence related to the pricing-strategy hypothesis that was tested.	**Responses that earn this point:** ▪ Provide a reference to at least one specific finding or piece of evidence collected during pricing-strategy hypothesis testing.
	Examples that do not earn this point: **Provide no reference to a market research finding or piece of evidence** ▪ "People liked our product when we changed it." ▪ "We can acquire the raw ingredients for $1.65 per snack cluster and sell them for $2.50 apiece."	**Examples that earn this point:** ▪ "More people would buy my product at the lower price than at the higher price." ▪ "We learned that 75% of 300 customers were willing to pay $0.25." ▪ "On average, target customers were willing to pay $14.99 for a multicolored LED adjustable desk lamp." ▪ "At a price of $20.00 per customized phone case, 3% of website visitors purchased a phone case. On the website where the price was $19.99, 6% of website visitors purchased a phone case."

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="5">Part C
Decision Making
(0–1 points)
Row 8</td><td>0 points
Does not explain how the evidence collected shaped decision making.</td><td>1 point
Explains how the evidence collected shaped decision making.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide a description that lacks a specific decision that was made.
Provide a description that does not reference the evidence that informed the decision.</td><td>Responses that earn this point:
Provide an explanation of how the evidence collected through pricing-strategy hypothesis testing influenced a decision by describing a specific decision that was made and the evidence that informed the decision.</td></tr>
<tr><td>Examples that do not earn this point:
Provide a description without a specific decision
“We learned that 57% of drivers were willing to pay $20.00 for a device that could be inserted between the driver’s seat and the center console to catch dropped items.”
“The results of my hypothesis testing proved that cost-based pricing would attract enough customers to be profitable.”
Provide a description that does not reference evidence
“Because of what we learned during hypothesis testing, we decided to charge 10% less than the least expensive competitor.”</td><td>Examples that earn this point:
“I decided to price my customizable phone cases at $19.99 instead of $20.00 each because twice as many customers bought a phone case from the website where the price was $19.99 than from the website where the price was $0.01 more.”
“We discovered during hypothesis testing that the market share held by competitors with above-average prices was very small (less than 5% each), and that 80% of the market share was held by the four competitors who charged similar prices, so we decided to go with a competitive pricing strategy.”</td></tr>
</table>

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="4">Part D
Concept Description
(0–1 points)
Row 9</td><td>0 points
Does not describe a purpose of external financial capital in business.</td><td>1 point
Describes a purpose of external financial capital in business.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide a description, definition, or example of sources of external financial capital, rather than describing a purpose of external financial capital.
Provide a description of a purpose of internal financial capital.
Provide an incomplete or inaccurate description of a purpose of external financial capital.</td><td>Responses that earn this point:
Provide an accurate description of at least one purpose of external financial capital:
To be a source of funding for entrepreneurs and startups
To be a source of funding for new and established businesses for product development, the purchase of fixed assets, or expanding the size of a business
To be a source of working capital</td></tr>
<tr><td>Examples that do not earn this point:
Provide a description, definition, or example of sources of external financial capital
“A bank loan is a source of external financial capital available to a business.”
Provide a description of a purpose of internal financial capital
“Businesses use bootstrapping to fund startups.”
Provide an incomplete or inaccurate description
“Businesses often seek to borrow money from banks and other lenders, which must be repaid with interest.”</td><td>Examples that earn this point:
“Businesses use external financial capital when they don’t have enough funds available to achieve a goal, such as launching a new product.”
“New businesses often seek external financial capital, in the form of loans or equity funding, to acquire the equipment and raw materials needed to produce a product prior to generating revenue through sales.”
“Businesses often seek external financial capital from lenders and investors when they want to grow their business and don’t have enough cash on hand to fund the expansion.”
“External financial capital is one way for businesses to pay startup costs if the founders do not have enough of their own money.”</td></tr>
</table>

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="5">Part D
Challenge to Viability
(0–1 points)
Row 10</td><td>0 points
Does not explain whether access to external financial capital represents a challenge to the viability of the product idea.</td><td>1 point
Explains why access to external financial capital does or does not represent a challenge to the viability of the product idea.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide no reason as to why access to financial capital does or does not represent a challenge to the viability of the product idea.
Provide no evidence to support the reason why access to financial capital does or does not represent a challenge to the viability of the product idea.</td><td>Responses that earn this point:
Provide an explanation as to why access to external financial capital does represent a challenge to the viability of the product idea using reasoning and evidence.
Provide an explanation as to why access to external financial capital does not represent a challenge to the viability of the product idea using reasoning and evidence.</td></tr>
<tr><td>Examples that do not earn this point:
Provide no reason as to why it does or doesn't represent a challenge
"Access to external financial capital represents a challenge to the viability of our product idea."
Provide a reason without evidence
"Our product doesn't cost a lot to produce so we don't need external funding."
"I would need $100,000 to get my business off the ground and know I'd be able to secure it without any trouble."
"We're not planning to launch this business, so we don't need external funding."
We anticipate difficulties because our startup costs exceed our internal financial capital."</td><td>Examples that earn this point:
"I can produce an initial inventory using cheap and readily available resources, like cotton fabric and Velcro, that I can afford myself. I can use the profits from the sales of my initial inventory to fund more production; therefore I do not need a bank loan or investors, so access to external financial capital is not a challenge to the viability of my business."
"Our startup costs, which include a minimum input order of 10,000 units, greatly exceed the amount of financial capital that we have, and we can't get a loan because we have no credit history, so access to external financial capital represents a challenge to the viability of our business."
"We needed $10,000 to make our first order of flexible desk lamps with LED bulbs, and we only had $1,000 in funds and no one would lend to us because we're high school students. We might have been able to raise money from friends and family, but we didn't want to start the business given our other responsibilities."
"I sold beaded bracelets that only cost $1 apiece to produce, so I didn't need to access significant external financial capital to produce and sell 200 bracelets at my current scale because I was able to bootstrap the $200."</td></tr>
</table>

Question 2: Personal Finance — 3 points

Throughout college, Audrey was careful with the money she earned as a restaurant server. After college, she was hired as a marketing associate at an annual salary of $68,000. With a combination of her savings and borrowing, Audrey purchased a two-year-old car, moved into and furnished a new apartment, and bought professional clothes.

Now, each month after Audrey pays her planned expenses, including her car and student loan payments, she has $785 left over that she can put toward debt repayment and savings. She wants to pay off all her debts as quickly as possible.

Audrey also wants to start saving for retirement and take full advantage of the retirement savings program offered by her employer, for which she is now eligible. For every 1% of her salary that Audrey saves through this program, her monthly net pay will decrease by about $50, but her retirement savings will increase by $113, due to reduced taxes plus the employer contribution. If she contributes 10% of her salary, her employer's matching contribution would be worth $6,800 in additional savings a year.

A list of Audrey's assets and liabilities is shown in the figure.

Audrey's Assets and Liabilities

Assets	Market Value/ Account Balance as of June 30
Two-year-old car	$ 35,000
Furniture	$ 2,000
Savings account balance	$ 2,300
Individual retirement account balance	$ 0
Liabilities	
Student loan balance (5.9% interest rate)	$ 50,000
Car loan balance (4.5% interest rate)	$ 30,000
Credit card balance (18.9% interest rate)	$ 2,500
Furniture store credit card balance (23% interest rate)	$ 5,000

Audrey has come to you, a financial advisor, for guidance regarding her financial situation.

(A) Using data from the scenario, **identify** a difference between Audrey's total assets and her total liabilities.

(B) **Describe** a financial challenge or opportunity indicated in the scenario that is currently impacting Audrey's ability to achieve her financial goals.

(C) **Explain** how a specific action taken by Audrey could help her achieve one of her financial goals.

Scoring Guidelines for Question 2: Personal Finance — 3 points

(A) — **1 point**

Using data from the scenario, **identify** a difference between Audrey's total assets and her total liabilities.

Examples that earn this point include the following:

- $48,200.
- The difference between $87,500 and $39,300 is $48,200.
- Audrey's total liabilities of $87,500 are greater than her total assets of $39,300.
- The difference between Audrey's total liabilities and her total assets is $48,200.
- Audrey's total liabilities, comprised of a student loan balance of $50,000, a car loan balance of $30,000, and $7,500 worth of credit card debt, are greater than Audrey's total assets, comprised of her 2-year-old car that's worth $35,000, some furniture worth $2,000, and a savings account balance of $2,300.

(B) — **1 point**

Describe a financial challenge or opportunity indicated in the scenario that is currently impacting Audrey's ability to achieve her financial goals.

Examples that earn this point include the following:

- Audrey doesn't have enough savings to pay off her loans all at once, and the more she saves each month the longer it will take her to pay off her loans.
- Audrey's net worth is negative, which means she owes more than she's worth and has made no progress toward her retirement goal.
- Audrey has the opportunity to save 10% of her salary each year and maximize her employer contribution for a total of $13,600 in savings a year. Audrey does not currently have enough room in her budget to take full advantage of her employer savings plan and pay off her debt as quickly as possible.

(C) — **1 point**

Explain how a specific action taken by Audrey could help her achieve one of her financial goals.

Examples that earn this point include the following:

- If Audrey contributes a part of each paycheck to her retirement plan, she can start building her retirement savings, because her employer-sponsored retirement plan is a form of a savings account.
- If Audrey spends $785 a month to pay off her various loans, she can pay off her debt as quickly as possible because her loan balances are her debts.
- Audrey can contribute 10% of her salary to her retirement plan, which would allow her to earn all of the employer matching contribution and reduce her paycheck by $500 a month. That still leaves her $285 a month to pay toward her debt, which would help her achieve both of her goals: saving for retirement and paying off her debts.
- Audrey can use her extra monthly income—up to $785 per month—to pay off her credit cards more quickly, which would cut the highest interest rate debt out of her budget and allow her to start saving more. She has $7,500 worth of credit card debt ($2,500 on one card and $5,000 on a furniture store card) and a monthly budget surplus of $785, so she could have those two high-interest rate loans paid off in less than a year.
- Audrey has enough of a budget surplus to be able to achieve both goals if she is willing to accept a slower start to retirement savings and a slightly longer time to pay off her debts. For example, she could spend $485 per month to pay off the two credit cards and save $300 a month (a 6% savings contribution).

Question 3: Business Concept Application — 3 points

CableFusion—a large media company that produces movies, TV shows, and news programs—wants to enter the streaming-service market. Streaming services allow customers to watch content on demand, over the internet. Subscribers to CableFusion Plus, the company's streaming-service product, will have full access to all of CableFusion's movies, TV shows, and news for one monthly fee.

The streaming-service market is characterized by intense competition among five major companies, with the top three controlling 86% of market share, by revenue. Although their streaming services are very similar, VistaFlix has a vast collection of movies, OrbioTV features live TV shows, and Vistify is known for its great customer service.

CableFusion's marketing and finance executives have been tasked with developing a competitive advantage strategy to attract customers and gain market share for the new product. They consulted websites and publications on the streaming-service industry and reviewed publicly available financial statements of the five existing streaming services. Figure 1 shows the market share, by revenue, for each potential rival. Figure 2 shows the monthly subscription fee for basic service (with ads) and premium service (no ads) for each potential rival.

(A) **Describe** a market research method CableFusion executives employed to gather the information represented in the scenario.

(B) **Describe** a finding revealed by the research.

(C) **Explain** how CableFusion could use a finding from the research to achieve a business goal.

FIGURE 1. Streaming-Service Market Share, by Revenue

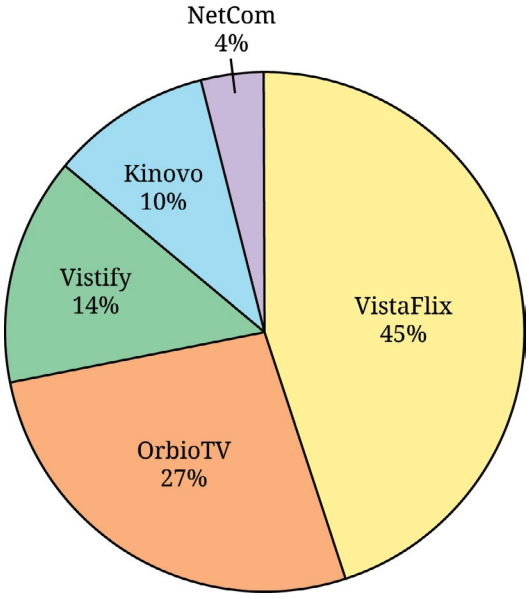
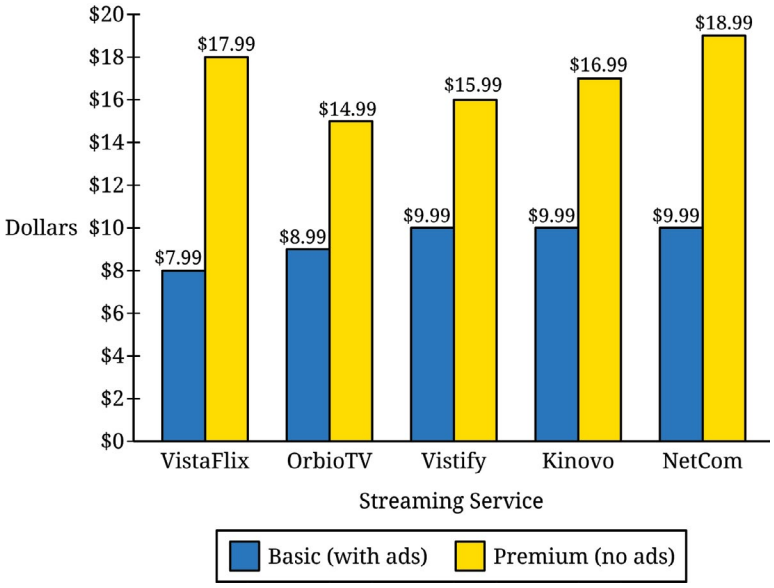


FIGURE 2. Monthly Subscription Fees for Basic and Premium Services



Scoring Guidelines for Question 3: Business Concept Application — 3 points

(A) **Describe** a market research method CableFusion executives employed to gather the information represented in the scenario. **1 point**

Examples that earn this point include the following:

- They gathered market share data and pricing information from external sources.
- They conducted secondary-source market research by gathering information about the streaming-service market landscape.
- CableFusion conducted secondary-source research, which involves gathering information from external sources.
- CableFusion executives consulted external sources, such as websites and publications on the streaming-service industry.
- CableFusion executives collected detailed information about rival businesses to assess the market landscape, which includes learning market share and pricing information about its potential rivals in the streaming-service market.
- They consulted websites and publications on the streaming-service industry and reviewed publicly available financial statements of the five existing streaming services, which is secondary-source market research.

(B) **Describe** a finding revealed by the research. **1 point**

Examples that earn this point include the following:

- VistaFlix has the largest share of the streaming-service market, with 45% of subscription-fee revenue.
- The biggest players in the streaming-service market are VistaFlix, OrbioTV, and Vistify, with market share by revenue of 45%, 27%, and 14%, respectively.
- NetCom charges the highest monthly subscription fees for its premium service, at $18.99 per month.
- The major players in the streaming-service industry use competitive pricing for their basic services, with three companies charging $9.99 per month and the other two charging $8.99 (OrbioTV) and $7.99 (VistaFlix)
- The company with the largest market share, VistaFlix, charges the lowest monthly subscription fee for its basic service at $7.99/month.

(C) **Explain** how CableFusion could use a finding from the research to achieve a business goal. **1 point**

Examples that earn this point include the following:

- CableFusion can use the findings on rival prices to develop a pricing strategy that will attract customers away from rivals, which will help increase its market share.
- CableFusion could use the finding that NetCom has the lowest market share to focus its marketing efforts on attracting customers away from the other three streaming-service companies.
- CableFusion could use the finding that VistaFlix has the biggest market share and its understanding of VistaFlix's product (a vast content library) to develop a competitive advantage strategy that positions CableFusion content against VistaFlix content with the hope of attracting customers away from VistaFlix to gain market share.
- CableFusion could use the findings related to rival prices to develop a pricing strategy, such as penetration pricing, which would allow the business to achieve competitive advantage through its low prices, which is a strategy that businesses use to attract customers and gain market share.
- CableFusion can use the finding that NetCom charges the most and has the smallest market share by revenue to determine that it should not charge a high fee because it would probably not be competitive with the existing businesses in this market, thus preventing it from achieving competitive advantage.
- Now that CableFusion has learned about the market landscape using secondary-source market research, it can use its findings related to how the products are differentiated (e.g., VistaFlix's vast content library and Vistify's great customer service) to engage in primary-source research with its target customer and to develop a product positioning strategy that will allow it to achieve competitive advantage through marketing, which would allow it to attract customers and gain market share.
- CableFusion has determined the market share for each existing company, and the prices for basic and premium services. It can use these findings to develop a messaging strategy to communicate to potential customers how CableFusion streaming services are different from other services in terms of pricing and product features, which can help it attract customers.
- CableFusion can use the finding that the two most popular streaming services, VistaFlix and OrbioTV, have the lowest "with ads" pricing, to determine that it could use penetration pricing to enter the market with an even lower "with ads" price, while setting its premium price higher. This would help it quickly capture market share among users willing to have ads on their streaming service and achieve competitive advantage through low prices.

Question 4: Business Decision — 8 points

You have been retained as a consultant to help the business described in the scenario decide between two alternative courses of action.

Background

Heritage Textiles (HT) is a small carpet manufacturer in Whittsville, Georgia. The current CEO is HT's owner, Catherine Whitt, who has deep family connections to Whittsville. Local legend says that her great-grandmother handwove the first cotton carpet produced in Whittsville in the late 1800s. Whitt's grandfather founded HT in 1920, and the business has operated in Whittsville for over 100 years.

Five years ago, HT began the search for a new location. Its existing production plant and operations facility was near capacity with no room to expand, and residents in a new housing development nearby had begun to complain that microscopic textile particles from HT's production process were being released into the air and causing respiratory problems. HT surveyed its employees and asked what they would do if HT moved to a location more than 35 miles from Whittsville. Of HT's 120 employees, 20% (24/120) said they would move with the company or commute, and 80% (96/120) said they would look for a new job.

The survey results indicated HT's new facility should be located in the Whittsville area. However, Dalton, Georgia—a town located 45 miles from Whittsville—was also considered because of its role in HT's supply chain. HT relies on the dyes and other carpet inputs produced in Dalton as well as the many textile warehouses there, which HT uses to store its inventory. HT's sizeable transportation costs would be nearly eliminated if the company relocated to Dalton. With over 150 carpet plants, numerous textile input suppliers, and a well-developed carpet and textile distribution network, Dalton—known as the "Carpet Capital of the World"—was an attractive option.

When a recession hit, the search for a new site was abandoned. The economic downturn led to three years of declining sales for HT and the closing or bankruptcy of many of HT's direct competitors—other niche carpet producers that served the southeastern United States. Recently, however, HT's performance has improved. Sales are up 15% this year and total sales hit the $5 million mark for the first time. As production has rebounded, so have complaints from HT's neighbors.

With no room to expand and a deteriorating relationship with the community, HT is once again in search of a new facility. According to Whitt, a 20,000-square-foot facility would increase production capacity by 50%. Whitt projects that orders for HT carpets will increase by an additional 25% over the next two years and that demand will remain at the level for at least another five years.

Whitt wonders if employees' willingness to relocate, as expressed in the survey results five years ago, might have changed since the recession. Nevertheless, her family connections to Whittsville, the highly skilled and loyal workers who produce HT's cotton-weave carpets, and the business's long history in the community make the prospect of leaving difficult. After a comprehensive search, Whitt has narrowed the relocation options to the following two courses of action.

Whittsville Proposal—New Facility in Whittsville

The first relocation option is to build a new 25,000-square-foot facility on the outskirts of Whittsville, four miles north of HT's current plant. The property is zoned for industrial use and is big enough to allow HT to custom build a facility to house its production and office operations. The construction estimate guarantees the facility will be ready for operation in 18 months.

Dalton Proposal—Renovated Facility in Dalton

The second relocation option is a 30,000-square-foot facility in Dalton that was formerly an auto parts plant. The facility was professionally inspected and found to be in good condition. A rough estimate of the cost to renovate the plant into a carpet-manufacturing facility, prepared by a construction contractor after a site visit, also guarantees an 18-month construction timeline.

Heritage Textiles Statement of Profit and Loss
Current year ended December 31
and
Projections for Year 1 at a new plant in Whittsville or renovated plant in Dalton

	Current Year Existing Plant	Whittsville Proposal	Dalton Proposal
Sales Revenue	$ 5,000,000	$ 6,250,000	$ 6,250,000
Cost of Goods Sold			
Resource costs: natural, human, and physical	$ 4,000,000	$ 4,800,000	$ 4,800,000
Transportation costs	$ 200,000	$ 250,000	$ 0
Total Cost of Goods Sold (COGS)	$ (4,200,000)	$ (5,050,000)	$ (4,800,000)
Gross Profit	$ 800,000	$ 1,200,000	$ 1,450,000
Operating Expenses	$ (500,000)	$ (500,000)	$ (500,000)
Net Profit before interest and taxes	$ 300,000	$ 700,000	$ 950,000

Projected increase in sales revenue (both locations) = 25%
Projected increase in resource costs (both locations) = 20%
Projected increase in transportation costs (Whittsville only) = 25%

Heritage Textiles
One-Time Relocation Costs

	Whittsville Proposal	Dalton Proposal
One-Time Costs		
Land	$ 550,000	$ 1,250,000
Plant construction	$ 1,000,000	$ 0
Building improvements on existing plant	$ 0	$ 610,000
Legal fees	$ 35,000	$ 35,000
New equipment purchase for increased production	$ 370,000	$ 370,000
Cost of relocating existing production and operations equipment	$ 45,000	$ 90,000
Severance pay for employees who leave HT due to move	$ 0	$ 175,000
Cost of recruiting and training new employees	$ 0	$ 70,000
Total One-Time Costs	**$ 2,000,000**	**$ 2,600,000**

Financial Analysis

Whitt has prepared summaries to capture the financial implications of each relocation option (Figures 1 and 2). Her projections reveal that the increased production and sales associated with a bigger facility will increase HT's profits and generate an annual return on investment (ROI) of 20% for the Whittsville option or 25% for the Dalton option. HT has $700,000 in cash to contribute to the one-time relocation costs, which means the business would need to secure a loan or issue stock to raise additional financial capital. To fund the remaining relocation costs, HT would need to raise an additional $1,300,000 if it chose the Whittsville proposal and an additional $1,900,000 if it chose the Dalton proposal.

(A) Heritage Textiles is a small carpet manufacturer that has a decision to make. Like all businesses, Heritage Textiles is affected by internal, market, and external factors that have an impact on its ability to achieve its goals.

i. **Describe** an internal, a market, or an external factor indicated in the scenario that affects Heritage Textiles.

ii. **Explain** how the factor you selected in part A (i) creates an opportunity or a problem for Heritage Textiles.

(B) There are several financial and nonfinancial criteria that can be used to compare the Whittsville and Dalton proposals.

i. Using projected annual return on investment as a criterion, **describe** a difference or similarity between the two courses of action. Include specific evidence related to each course of action in your response.

ii. Using one additional financial criterion relevant to the decision, **describe** a difference or similarity between the two courses of action. Include specific evidence related to each course of action in your response.

iii. Using one nonfinancial criterion relevant to the decision, **describe** a difference or similarity between the two courses of action. Include specific evidence related to each course of action in your response.

(C) Recommend a course of action for Heritage Textiles.

In your response you should do the following:

- **Recommend** one of the two courses of action in the scenario.
- **Explain** why you recommend that course of action.
- **Support** your recommendation using any three specific criteria, which may include the specific financial and nonfinancial criteria from part B or other specific financial and nonfinancial criteria. Include evidence from the scenario related to each criterion you use.

Scoring Guidelines for Question 4: Business Decision — 8 points

Reporting Category	Scoring Criteria	
Part A (i) **Factor** **(0–1 points)** **Row 1**	**0 points** Does not describe an internal, a market, or an external factor indicated in the scenario that affects the business.	**1 point** Describes an internal, a market, or an external factor indicated in the scenario that affects the business.
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: ▪ Provide no response to the prompt. ▪ Provide an incomplete description of the factor that affects Heritage Textiles. ▪ Provide a description of something that is not an internal, a market, or an external factor affecting Heritage Textiles. ▪ Provide a description of an internal, a market, or an external factor that may affect Heritage Textiles but is not indicated in the scenario.	**Responses that earn this point:** ▪ Provide an accurate description of an **internal factor** indicated in the scenario that affects Heritage Textiles: ◆ Current plant size ◆ Highly skilled carpet-making employees **OR** ▪ Provide an accurate description of a **market factor** indicated in the scenario that affects Heritage Textiles: ◆ Increased demand for carpets ◆ Bankruptcy or closing of direct competitors **OR** ▪ Provide an accurate description of an **external factor** indicated in the scenario that affects Heritage Textiles: ◆ Complaints from residents about alleged air pollution ◆ Overall stability and performance of the economy
	Examples that do not earn this point: **Provide an incomplete description** ▪ "Customer demand." ▪ "Heritage Textiles is more than 100 years old." ▪ "Air pollution." **Provide a description of something that is not an internal, a market, or an external factor** ▪ "Heritage Textiles has to relocate." ▪ "Heritage Textiles has a decision to make." **Provide a description of a factor that is not indicated in the scenario** ▪ "The power of resource suppliers to raise prices."	**Examples that earn this point:** ▪ "Customer demand for carpets." ▪ "Closing or bankruptcy of Heritage Textiles' direct competitors." ▪ "An internal factor affecting Heritage Textiles is the size of its current production facility, which determines how many carpets Heritage Textiles can produce and sell." ▪ "An external factor affecting Heritage Textiles is the overall health of the economy, which results in increased consumer spending when the economy is strong and stable and decreased consumer spending when the economy is weak or unstable." ▪ "A factor affecting Heritage Textiles is the complaints from the neighbors who claim that the microscopic textile particles are affecting their health."
	Additional Notes: ▪ Students do not need to identify whether the factor they describe is an internal, a market, or an external factor. ▪ Students may earn the point for a complete description of a factor that affects the business even if the factor is misidentified as internal, market, or external.	

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="4">Part A (ii)
Opportunity or Problem
(0–1 points)
Row 2</td><td>0 points
Does not explain why the factor selected in part A (i) creates an opportunity or a problem for the business.</td><td>1 point
Explains why the factor selected in part A (i) creates an opportunity or a problem for the business.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide an incomplete explanation of the relationship between the factor identified in part A (i) and an opportunity or a problem for Heritage Textiles.</td><td>Responses that earn this point:
Provide a complete explanation as to why the internal factor described in part A (i) creates an opportunity or a problem for Heritage Textiles:
The current plant size is creating a problem for the business because it cannot produce more carpets to meet the projected sales increase.
The business's highly skilled employees in Whittsville create an opportunity for the business to differentiate itself with higher-quality products.
OR
Provide a complete explanation as to why the market factor described in part A (i) creates an opportunity or a problem for Heritage Textile:
The increase in market demand for carpets creates the opportunity to sell more carpets because there are more people willing to buy them.
The decrease in the number of competitors creates the opportunity to gain market share because customers have fewer choices.
OR
Provide a complete explanation as to why the external factor described in part A (i) creates an opportunity or a problem for Heritage Textiles:
Complaints alleging air pollution by residents are a problem because they are straining the strong ties Heritage Textiles has with the community where it has operated for over 100 years.
The fluctuation in the overall level of spending in the economy creates a problem for the business because demand for its product, and thus its sales, revenue, and profitability, all fluctuate in response.</td></tr>
<tr><td>Examples that do not earn this point:
Provide an incomplete explanation
"The complaints by neighbors of air pollution are bad for Heritage Textiles."
"The fact that there's no room for Heritage Textiles to expand production is a problem for the business."</td><td>Examples that earn this point:
"The increase in market demand is creating an opportunity for Heritage Textiles to sell more carpets, increasing revenue and profits."
"The current plant size is creating a problem for Heritage Textiles because it lacks the capacity to respond to increases in demand, losing out on sales, revenue, and profits."
"The strengthening economy is creating an opportunity for Heritage Textiles as the increase in consumer spending is causing an increase in demand for Heritage Textiles' carpets."</td></tr>
</table>

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="5">Part B (i)
Comparison 1
(0–1 points)
Row 3</td><td>0 points
Does not describe a difference or similarity between the two courses of action using the criterion named in the prompt or include specific evidence related to each course of action.</td><td>1 point
Describes a difference or similarity between the two courses of action using the criterion named in the prompt and includes specific evidence related to each course of action.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide no difference or similarity.
Provide a difference or similarity in terms of a criterion other than projected annual return on investment (ROI).
Provide a difference or similarity that is not supported by evidence related to each course of action.
Provide a difference or similarity that is supported by inaccurate or irrelevant evidence.</td><td>Responses that earn this point:
Provide a description of a difference or similarity between the Whittsville and Dalton proposals using projected annual return on investment and specific evidence for each proposal.
Provide a description of a difference or similarity between the Whittsville and Dalton proposals using additional net profit relative to projected one-time costs (or investment required) as a criterion and specific evidence for each proposal.</td></tr>
<tr><td>Examples that do not earn this point:
Provide no difference or similarity
“The projected annual ROI in Dalton is 25%.”
Provide a difference or similarity in terms of a criterion other than projected annual ROI
“If Heritage Textiles moves to Dalton, it will earn $250,000 more in profits than if it stays in Whittsville.”
Provide a difference or similarity that is not supported by evidence
“The Dalton proposal has a higher projected annual ROI than the Whittsville proposal.”
Provide a difference or similarity that is supported by inaccurate or irrelevant evidence
“The Whittsville proposal has a higher ROI of 25%, compared to the Dalton proposal’s ROI of 20%.”
“The Dalton proposal has a higher ROI of $950,000, compared to the Whittsville proposal ROI of $700,000.”</td><td>Examples that earn this point:
“Dalton’s projected annual ROI is 25% and Whittsville’s is 20%.”
“If Heritage Textiles moves to Dalton, it will have to spend $2.6 million to earn an additional net profit of $950,000, which is a better ROI than in Whittsville, where it would have to spend $2 million to earn an additional net profit of $750,000.”</td></tr>
</table>

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="6">Part B (ii)
Comparison 2
(0–1 points)
Row 4</td><td>0 points
Does not describe a difference or similarity between the two courses of action using an additional financial or nonfinancial criterion or include specific evidence related to each course of action.</td><td>1 point
Describes a difference or similarity between the two courses of action using an additional financial or nonfinancial criterion and includes specific evidence related to each course of action.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide no difference or similarity.
Provide a difference or similarity in terms of a nonfinancial criterion.
Provide a difference or similarity that is not supported by evidence related to each course of action.
Provide a difference or similarity that is supported by inaccurate or irrelevant evidence.</td><td>Responses that earn this point:
Provide a description of a difference or similarity between the Whittsville and Dalton proposals using an additional financial criterion and include specific evidence related to each proposal:
Criterion: Projected total one-time costs
Evidence: $2 m for Whittsville and $2.6 m for Dalton
Criterion: Amount of external funding needed
Evidence: $1.3 for Whittsville and $1.9 m for Dalton
Criterion: Projected transportation expenses
Evidence: $250,000 for Whittsville and $0 for Dalton
Criterion: Projected gross profit
Evidence: $1.2 m for Whittsville and $1.45 million for Dalton
Criterion: Projected gross profit margin
Evidence: 19.2% for Whittsville and 23.2% for Dalton
Criterion: Projected net profit before interest and taxes
Evidence: $700,000 for Whittsville and $950,000 for Dalton
Criterion: Net profit margin before interest and taxes
Evidence: 11.2% for Whittsville and 15.2% for Dalton
Criterion: Total interest expense
Evidence: lower borrowing needs means lower total interest expense for Whittsville and higher borrowing needs means higher total interest expense for Dalton</td></tr>
<tr><td>Examples that do not earn this point:
Provide no difference or similarity
“The Dalton proposal has many financial benefits.”
Provide a difference or similarity in terms of nonfinancial criterion
“The Whittsville proposal is better because of the skilled workers in Whittsville.”
Provide a difference or similarity that is not supported by evidence
“The Dalton proposal is more profitable than the Whittsville proposal.”
Provide a difference or similarity that is supported by inaccurate or irrelevant evidence
“The Whittsville proposal is more profitable, based on a comparison of the total one-time costs of $2 million for Whittsville and $2.6 million for Dalton.”</td><td>Examples that earn this point:
“The Whittsville proposal has one-time costs of $2 million, and the Dalton proposal has one-time costs of $2.6 million.”
“The Whittsville proposal requires $1.3 million in external funding, whereas the Dalton proposal requires $1.9 million in external funding.”
“The Dalton proposal is more profitable by every measure, including net profit before interest and taxes. If Heritage Textiles relocates to Dalton, it will earn $250,000 more in profits than if it relocates to the new facility in Whittsville.”</td></tr>
<tr><td colspan="2">Additional Notes:
If a nonfinancial criterion has clear and direct financial implications (e.g., the percentage of market share), the financial criterion comparison point can be awarded.</td></tr>
</table>

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="5">Part B (iii)
Comparison 3
(0–1 points)
Row 5</td><td>0 points
Does not describe a difference or similarity between the two courses of action using a financial or nonfinancial criterion or include specific evidence related to each course of action.</td><td>1 point
Describes a difference or similarity between the two courses of action using a financial or nonfinancial criterion and includes specific evidence related to each course of action.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide no difference or similarity.
Provide a difference or similarity in terms of a financial criterion.
Provide a difference or similarity that is not supported by evidence related to each course of action.
Provide a difference or similarity that is supported by inaccurate or irrelevant evidence.</td><td>Responses that earn this point:
Provide a description of a difference or similarity between the Whittsville and Dalton proposals using a nonfinancial criterion and include specific evidence related to each proposal:
Criterion: New plant size
Evidence: 25,000 square feet for Whittsville; 30,000 square feet for Dalton.
Criterion: Supply chain risk
Evidence: The renovated facility in Dalton is in the same town as Heritage Textile's raw materials and distribution network; the new facility in Whittsville is 45 miles away.
Criterion: Threat of new entrants
Evidence: If Heritage Textiles moves to Dalton, up to 80% of its workers might quit, and it will leave behind an empty carpet plant. A new rival might be able to acquire both the plant and the employees. If Heritage Textiles stays in Whittsville, it will preserve all 120 skilled employees, who would not be available to work for a rival.
Criterion: Core value/connection to community of Whittsville
Evidence: Heritage Textiles has a long connection to Whittsville where it has operated for more than 100 years. It has no such relationship with the city of Dalton.
Criterion: Facility construction
Evidence: In Whittsville, the new facility will be custom built for Heritage Textiles. In Dalton, the new facility will be a renovated former auto parts plant.</td></tr>
<tr><td>Examples that do not earn this point:
Provide no difference or similarity
"The new plant in Whittsville is only 4 miles from the current facility."
Provide a difference or similarity in terms of a financial criterion
"The amount of external funding needed means that the Whittsville proposal is better than the Dalton proposal."
Provide a difference or similarity that is not supported by evidence from the scenario
"The renovated plant in Dalton is bigger than the new factory in Whittsville."
"The supply chain risk associated with staying in Whittsville is higher than the supply chain risk of moving to Dalton."
Provide a difference or similarity that is supported by inaccurate or irrelevant evidence
"Moving to Dalton is less risky than staying in Whittsville, because renovating an existing facility is safer than building a new one from the ground up."</td><td>Examples that earn this point:
"The renovated auto parts factory in Dalton will be bigger than the new plant in Whittsville by 5,000 square feet (30,000 vs. 25,000)."
"Staying in Whittsville means remaining 45 miles away from the source of the carpet raw materials and distribution network that are located in Dalton. Moving to Dalton means that Heritage Textiles will be located in the same city as these raw materials and distribution facilities, which reduces the risk of delays and other problems that could affect the business's supply chain."</td></tr>
</table>

<table>
<tr><th>Reporting Category</th><th colspan="2">Scoring Criteria</th></tr>
<tr><td rowspan="5">Part C
Recommendation
(0–1 points)
Row 6</td><td>0 points
Does not recommend one of the two courses of action.
OR
Does not explain why that course of action was recommended.</td><td>1 point
Recommends one of the two courses of action and explains why that course of action was recommended.</td></tr>
<tr><td colspan="2">Decision Rules and Scoring Notes</td></tr>
<tr><td>Responses that do not earn this point:
Provide no response to the prompt.
Provide no recommended course of action.
Provide no explanation of why that course of action was recommended.
Recommend a course of action that is not one of the two alternatives described in the scenario.</td><td>Responses that earn this point:
Recommend the Whittsville proposal and explain why it was recommended.
Recommend the Dalton proposal and explain why it was recommended.</td></tr>
<tr><td>Examples that do not earn this point:
Provide no recommended course of action
“There are many advantages and disadvantages associated with the Whittsville proposal and the Dalton proposal.”
Provide no line of reasoning
“The Whittsville proposal is preferable to the Dalton proposal.”
Recommend a course of action that is not one of two proposals in the scenario
“Heritage Textiles should stay in its current facility but use the money it has available to increase the plant’s capacity. That way it achieves all the benefits of staying in Whittsville, with none of the drawbacks.”</td><td>Examples that earn this point:
“The Whittsville proposal is preferable to the Dalton proposal because it will achieve all of the operational needs of a new factory while allowing the business to stay in its hometown.”
“Heritage Textiles should move to the renovated auto parts factory in Dalton because it is the more profitable option.”</td></tr>
<tr><td colspan="2">Additional Notes:
The explanation does not have to be established in the sentence that contains the recommendation. If a rationale is established anywhere in the response, a student may earn this point.</td></tr>
</table>

Reporting Category	Scoring Criteria		
Part C **Evidence** **(0–2 points)** **Row 7**	**0 points** Provides no evidence to support the recommended course of action. **OR** Supports the recommendation using only one specific criterion and includes evidence from the scenario related to that criterion.	**1 point** Supports the recommendation using **two specific criteria** and includes evidence from the scenario related to each criterion.	**2 points** Supports the recommendation using **three specific criteria** and includes evidence from the scenario related to each criterion.
	Decision Rules and Scoring Notes		
	Responses that do not earn this point: ▪ Provide no response to the prompt. ▪ Provide no evidence related to the criteria used to support the recommendation. ▪ Provide evidence related to one specific criterion used to support the recommendation.	**Responses that earn 1 point:** ▪ Provide two specific financial and/or nonfinancial criteria and evidence from the scenario related to each criterion to support the recommendation that the Whittsville proposal is preferable. ▪ Provide two specific financial and/or nonfinancial criteria and evidence from the scenario related to each criterion to support the recommendation that the Dalton proposal is preferable.	**Responses that earn 2 points:** ▪ Provide three specific financial and/or nonfinancial criteria and evidence from the scenario related to each criterion to support the recommendation that the Whittsville proposal is preferable. ▪ Provide three specific financial and/or nonfinancial criteria and evidence from the scenario related to each criterion to support the recommendation that the Dalton proposal is preferable.
	Examples that do not earn this point: **Provide no evidence related to the criteria** ▪ "In Dalton, Heritage Textiles will earn more gross profit, more net profit before interest and taxes, and a higher ROI." **Provide evidence related to only one criterion** ▪ "Since ROI is very important to businesses, the proposal with the highest ROI should be the one chosen. Also, the factory in Dalton will be 30,000 square feet, which is bigger than the new factory in Whittsville, which is only 20,000 square feet."	**Examples that earn 1 point:** ▪ "With the importance to the business of its 100+ year history in Whittsville, Heritage Textiles should do everything it can to stay in its hometown and avoid moving 45 miles away and losing 96 skilled workers." ▪ "The opportunity to custom build a new facility in Whittsville is likely to have operational benefits in terms of productive efficiency over the need to renovate an old factory that was used to produce auto parts; plus building a new factory in Whittsville offers the opportunity to address any air pollution issues, preserving the relationship between the business and the community." ▪ "Heritage Textiles is in the business of making profit and the Dalton proposal is $250,000 more profitable in terms of net profit before interest and taxes and comes with a projected ROI that is 5 percentage points higher than the Whittsville proposal."	**Examples that earn 2 points:** ▪ "Up to 80% of Heritage Textiles' 120 highly skilled employees will quit if the business moves 45 miles away to Dalton, which could cost $245,000 in severance and recruitment costs (and possibly more). Because the one-time costs are lower in Whittsville, the business can save $600,000 by staying there, which means borrowing less and paying less interest." ▪ "Heritage Textiles will earn $250,000 more per year in profit in Dalton and an ROI of 25% vs. 20% annually. The supply chain risk will also be reduced because Heritage Textiles will be located in the same city as its raw materials and distribution network. Staying in Whittsville means risking transporting raw materials and finished carpets 45 miles back and forth from Dalton."

Reporting Category	Scoring Criteria
	Additional Notes: ▪ The criteria and specific evidence used to support the recommendation do not have to be the same as the criteria and specific evidence used in part B. ▪ Any combination of three criteria (financial and/or nonfinancial) along with related evidence may be used to support the recommendation. ▪ If a criterion used to support the recommendation in part C is based on specific evidence used to compare the courses of action in part B, students can earn the point for "includes evidence from the scenario related to each criterion." For example, if the response: "In Dalton, Heritage Textiles will earn more gross profit, more net profit before interest and taxes, and a higher ROI." was accompanied by a part B response that included the specific information from the scenario related to "gross profit, net profit before interest and taxes, and ROI" for both courses of action, then the response would earn 2 points, not 0.

AP BUSINESS WITH
PERSONAL FINANCE



Appendix

AP BUSINESS WITH PERSONAL FINANCE

National Standards for Personal Financial Education

National Standards for Personal Financial Education

Topic Summary of the Standards

I. EARNING INCOME

Most people earn wage and salary income in return for working, and they can also earn income from interest, dividends, rents, entrepreneurship, business profits, or increases in the value of investments. Employee compensation may also include access to employee benefits such as retirement plans and health insurance. Employers generally pay higher wages and salaries to more educated, skilled, and productive workers. The decision to invest in additional education or training can be made by weighing the benefit of increased income-earning and career potential against the opportunity costs in the form of time, effort, and money. Spendable income is lower than gross income due to taxes assessed on income by federal, state, and local governments.

GRADE 12 STANDARDS

Standard	*Students will know that …*
Earning Income **12-1**	Compensation for a job or career can be in the form of wages, salaries, commissions, tips, or bonuses, and may also include contributions to employee benefits, such as health insurance, retirement savings plans, and education reimbursement programs.
Earning Income **12-2**	In addition to wages and paid benefits, employees may also value intangible (noncash) benefits, such as good working conditions, flexible work hours, telecommuting privileges, and career advancement potential.
Earning Income **12-3**	People vary in their opportunity and willingness to incur the present costs of additional training and education in exchange for future benefits, such as earning potential.
Earning Income **12-4**	Employers generally pay higher wages or salaries to more educated, skilled, and productive workers than to less educated, skilled, and productive workers.
Earning Income **12-5**	Changes in economic conditions, technology, or the labor market can cause changes in income, career opportunities, or employment status.
Earning Income **12-6**	Federal, state, and local taxes fund government-provided goods, services, and transfer payments to individuals. The major types of taxes are income taxes, payroll taxes, property taxes, and sales taxes.
Earning Income **12-7**	The type and amount of taxes people pay depend on their sources of income, amount of income, and amount and type of spending.
Earning Income **12-8**	Interest, dividends, and capital appreciation (gains) are examples of unearned income derived from financial investments. Capital gains are subject to different tax rates than earned income.
Earning Income **12-9**	Tax deductions and credits reduce income tax liability.
Earning Income **12-10**	Retirement income typically comes from some combination of continued employment earnings, Social Security, employer-sponsored retirement plans, and personal investments.
Earning Income **12-11**	Owning a small business can be a person's primary career or can supplement income from other sources.

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II. SPENDING

A budget is a plan for allocating a person's spendable income to necessary and desired goods and services. When there is sufficient money in their budget, people may decide to give money to others, save, or invest to achieve future goals. People can often improve their financial wellbeing by making well-informed spending decisions, which includes critical evaluation of price, quality, product information, and method of payment. Individual spending decisions may be influenced by financial constraints, personal preferences, unique needs, peers, and advertising.

GRADE 12 STANDARDS

Standard	*Students will know that …*
Spending **12-1**	A budget helps people achieve their financial goals by allocating income to necessary and desired spending, saving, and philanthropy.
Spending **12-2**	Consumer decisions are influenced by the price of products or services, the price of alternatives, the consumer's budget and preferences, and potential impact on the environment, society, and economy.
Spending **12-3**	When purchasing a good that is expected to be used for a long time, consumers consider the product's durability, maintenance costs, and various product features.
Spending **12-4**	Consumers may be influenced by how prices of goods and services are advertised, and whether prices are fixed or negotiable.
Spending **12-5**	Consumers incur costs and realize benefits when searching for information related to the purchase of goods and services.
Spending **12-6**	Housing decisions depend on individual preferences, circumstances, and costs, and can impact personal satisfaction and financial well-being.
Spending **12-7**	People donate money, items, or time to charitable and nonprofit organizations because they value the services provided by the organization and/or gain satisfaction from giving.
Spending **12-8**	Federal and state laws, regulations, and consumer protection agencies (e.g., Federal Trade Commission, Consumer Affairs office, and Consumer Financial Protection Bureau) can help individuals avoid unsafe products, unfair practices, and marketplace fraud.
Spending **12-9**	Having an organized system for keeping track of spending, saving, and investing makes it easier to make financial decisions.

III. SAVING

People who have sufficient income can choose to save some of it for future uses such as emergencies or later purchases. Savings decisions depend on individual preferences and circumstances. Funds needed for transactions, bill-paying, or purchases, are commonly held in federally insured checking or savings accounts at financial institutions because these accounts offer easy access to their money and low risk. Interest rates, fees, and other account features vary by type of account and among financial institutions, with higher rates resulting in greater compound interest earned by savers.

GRADE 12 STANDARDS

Standard	*Students will know that …*
Saving **12-1**	Financial institutions offer several types of savings accounts, including regular savings, money market accounts, and certificates of deposit (CDs), that differ in minimum deposits, rates, and deposit insurance coverage.
Saving **12-2**	Deposit account interest rates and fees vary between financial institutions and depend on market conditions and competition.
Saving **12-3**	Unless offered by insured financial institutions, mobile payment accounts and cryptocurrency accounts are not federally insured and usually do not pay interest to depositors.
Saving **12-4**	Inflation can erode the value of savings if the interest rate earned on a savings account is less than the inflation rate.
Saving **12-5**	Government agencies such as the Federal Reserve, the FDIC, and the NCUA, along with their counterparts in state government, supervise and regulate financial institutions to improve financial solvency, legal compliance, and consumer protection.
Saving **12-6**	Tax policies that allow people to save pretax earnings or to reduce or defer taxes on interest earned provide incentives for people to save.
Saving **12-7**	Employer defined contribution retirement plans and health savings accounts can provide incentives for employees to save.
Saving **12-8**	People can reduce the potential for future financial strife with a partner or spouse by sharing personal financial information, goals, and values prior to combining finances.
Saving **12-9**	There are many strategies that can help people manage psychological, emotional, and external obstacles to saving, including automated savings plans, employer matches, and avoiding personal triggers.

IV. INVESTING

People can choose to invest some of their money in financial assets to achieve long-term financial goals, such as buying a house, funding future education, or securing retirement income.

Investors receive a return on their investment in the form of income and/or growth in value of their investment over time. People can more easily achieve their financial goals by investing steadily over many years, reinvesting dividends, and capital gains to compound their returns.

Investors have many choices of investments that differ in expected rates of return and risk.

Riskier investments tend to earn higher long-run rates of return than lower-risk investments.

Investors select investments that are consistent with their risk tolerance, and they diversify across a number of different investment choices to reduce investment risk.

GRADE 12 STANDARDS

Standard	*Students will know that …*
Investing **12-1**	A person's investment risk tolerance depends on factors such as personality, financial resources, investment experiences, and life circumstances.
Investing **12-2**	Investors earn investment returns from price changes and annual cash flows (such as interest, dividends or rent). The nominal annual rate of return is the annual total dollar benefit as a percentage of the beginning price.
Investing **12-3**	Investors expect to earn higher rates of return when they invest in riskier assets.
Investing **12-4**	Because inflation reduces purchasing power over time, the real return on a financial asset is lower than its nominal return.
Investing **12-5**	The prices of financial assets change in response to market conditions, interest rates, company performance, new information, and investor demand.
Investing **12-6**	When making diversification and asset allocation decisions, investors consider their risk tolerance, goals, and investing time horizon.
Investing **12-7**	Expenses of buying, selling, and holding financial assets decrease the rate of return from an investment.
Investing **12-8**	Tax rules affect the rate of return on different investments, and can vary by holding period, type of income, and type of account.
Investing **12-9**	Common behavioral biases can result in investors making decisions that adversely affect their investment outcomes.
Investing **12-10**	Financial technology can counterbalance negative behavioral factors when making investment decisions.
Investing **12-11**	Many investors buy and sell financial assets through discount brokerage firms that provide inexpensive investment services and advice using financial technology.
Investing **12-12**	Federal regulation of financial markets is designed to ensure that investors have access to accurate information about potential investments and are protected from fraud.
Investing **12-13**	Investors often compare the performance of their investments against a benchmark, such as a diversified stock or bond index.
Investing **12-14**	Criteria for selecting financial professionals for investment advice include licensing, certifications, education, experience, and cost.

V. MANAGING CREDIT

Credit allows people to purchase and enjoy goods and services today, while agreeing to pay for them in the future, usually with interest. There are many choices for borrowing money, and lenders charge higher interest and fees for riskier loans or riskier borrowers. Lenders evaluate creditworthiness of a borrower based on the type of credit, past credit history, and expected ability to repay the loan in the future. Credit reports compile information on a person's credit history, and lenders use credit scores to assess a potential borrower's creditworthiness. A low credit score can result in a lender denying credit to someone they perceive as having a low level of creditworthiness. Common types of credit include credit cards, auto loans, home mortgage loans, and student loans. The cost of post-secondary education can be financed through a combination of grants, scholarships, work-study, savings, and federal or private student loans.

GRADE 12 STANDARDS

Standard	*Students will know that …*
Credit **12-1**	Borrowers can compare the cost of credit using the Annual Percentage Rate (APR) and other terms in the loan or credit card contract.
Credit **12-2**	Loans that are secured by collateral have lower interest rates than unsecured loans because they are less risky to lenders.
Credit **12-3**	Monthly mortgage payments vary depending on the amount borrowed, the repayment period, and the interest rate, which can be fixed or adjustable.
Credit **12-4**	Post-secondary education is often financed by students and families/caregivers through a combination of scholarships, grants, student loans, work-study, and savings.
Credit **12-5**	Federal student loans have lower rates and more favorable repayment terms than private student loans, and may be subsidized.
Credit **12-6**	Down payments reduce the amount needed to borrow.
Credit **12-7**	Lenders assess creditworthiness of potential borrowers by consulting credit reports compiled by credit bureaus.
Credit **12-8**	A credit score is a numeric rating that assesses a person's credit risk based on information in their credit report.
Credit **12-9**	Credit reports and credit scores may be requested and used by entities other than lenders.
Credit **12-10**	Borrowers who face negative consequences because they are unable to repay their debts may be able to seek debt management assistance.
Credit **12-11**	In extreme cases, bankruptcy may be an option for people who are unable to repay their debts.
Credit **12-12**	Consumer credit protection laws govern disclosure of credit terms, discrimination in borrowing, and debt collection practices.
Credit **12-13**	Alternative financial services, such as payday loans, check-cashing services, pawnshops, and instant tax refunds, provide easy access to credit, often at relatively high cost.

VI. MANAGING RISK

People are exposed to personal risks that can result in lost income, assets, health, life, or identity. They can choose to manage those risks by accepting, reducing, or transferring them to others. When people transfer risk by buying insurance, they pay money now in return for the insurer covering some or all financial losses that may occur in the future. Common types of insurance include health insurance, life insurance, and homeowner's or renter's insurance. The cost of insurance is related to the size of the potential loss, the likelihood that the loss event will happen, and the risk characteristics of the asset or person being insured. Identity theft is a growing concern for consumers and businesses. Stolen personal information can result in financial losses and fraudulent credit charges. The risk of identity theft can be minimized by carefully guarding personal financial information.

GRADE 12 STANDARDS

Standard	*Students will know that …*
Managing Risk **12-1**	People vary with respect to their willingness to accept risk and in how much they are willing to pay for insurance that will allow them to minimize future financial loss.
Managing Risk **12-2**	The decision to buy insurance depends on perceived risk exposure, the price of insurance coverage, and individual characteristics such as risk attitudes, age, occupation, lifestyle, and financial profile.
Managing Risk **12-3**	Some types of insurance coverage are mandatory.
Managing Risk **12-4**	Insurance premiums are lower for people who take actions to reduce the likelihood and/or financial cost of losses and for those who buy policies with larger deductibles or copayments.
Managing Risk **12-5**	Health insurance provides coverage for medically necessary health care and may also cover some preventive care. It is sometimes offered as an employee benefit with the employer paying some or all of the premium cost.
Managing Risk **12-6**	Disability insurance replaces income lost when a person is unable to earn their regular income due to injury or illness. In addition to privately purchased policies, some government programs provide disability protection.
Managing Risk **12-7**	Auto, homeowner's, and renter's insurance reimburse policyholders for financial losses to their covered property and the costs of legal liability for their damages to other people or property.
Managing Risk **12-8**	Life insurance provides funds for beneficiaries in the event of an insured person's death. Policy proceeds are intended to replace the insured's lost wages and/or to fund their dependents' future financial needs.
Managing Risk **12-9**	Unemployment insurance, Medicaid, and Medicare are public insurance programs that protect individuals from economic hardship caused by certain risks.
Managing Risk **12-10**	Insurance fraud is a crime that encompasses illegal actions by the buyer (e.g., falsified claims) or seller (e.g., representing non-existent companies) of an insurance contract.
Managing Risk **12-11**	Online transactions and failure to safeguard personal documents can make consumers vulnerable to privacy infringement, identity theft, and fraud.
Managing Risk **12-12**	Extended warranties and service contracts are like an insurance policy.



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Cover Sheet

Dover Area School District
Curriculum Cover Sheet

CIP Code: 50.0402

CIP Title: Commercial and Advertising Art

Planned Hours: 1320

CIP Description:

A program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via illustrations and other forms of printed media. Includes instruction in concept design, layout, paste-up and techniques such as engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage and computer graphics.

Component Courses:

665 - Web Page Design (1.0 Credit)

In this course, students will gain a foundational knowledge of website creation and coding. Students will be able to apply their knowledge for the planning, designing, and development of their own websites over the course of the semester. By the end of this course, students will be comfortable creating, coding, and posting basic HTML and CSS files to the Internet. Critical thinking will be encouraged through class interactions, assignments, and projects.

836 - Digital Photography (120 hours) Ⓗ

This is an introductory course in digital photography. The focus of this class will be to teach the basic use of a digital camera. Students will first learn photographic composition rules that help photographers take better pictures. Students will learn to control the settings on their camera to help them take better photos. The setting changes will also allow students to capture pictures in various locations, times of the day, action shots, and in the photo studio . Students will learn some basic photo editing skills using Photoshop.

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840 - Multi Media I (120 hours) Ⓗ

In this course, students will learn and apply the history and advancements of communication technology, basic photography skills, and layout and design fundamentals while working with Adobe Photoshop, InDesign, and Premiere to create and edit digital media. This course is hands-on and requires creativity, attention to detail, and an interest in visual communication. Students will learn to operate a digital camera, apply photographic composition techniques, and capture quality images for a variety of purposes. Emphasis will be placed on visual storytelling, photojournalism, and the use of media to communicate information to specific audiences. In addition to photography, students will be introduced to video production concepts, including camera operation, audio recording, basic editing, and learn the various roles involved in planning, producing, and delivering video productions. Through collaborative projects, students will gain experience working as members of a production team and *may be required to report to the classroom during homeroom on days that your team is producing the morning announcements.* The course culminates with the creation of a photo-narrative project that demonstrates the ability to tell a story through images and design.

841 - Multi Media II (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF MULTIMEDIA I

In this course, students will expand upon the photography, design, and video production skills developed in Multimedia I. Students will become active members of a collaborative media production team, creating content that informs, educates, and engages an audience. Emphasis will be placed on videography, journalism, interviewing techniques, and the development of video segments from concept through final edit. Students will gather information, capture photo and video content, and apply industry-standard production workflows using Adobe Photoshop, InDesign, and Premiere. Students will continue to develop page layout and visual communication skills while creating multimedia projects for a variety of purposes and audiences. Students will be expected to photograph and document events both inside and outside the school day as they build a professional portfolio of media work. ***Attention will be focused on being sure all skills on the CAA task list have been acquired and that students are prepared for the NOCTI exam.***

842 - Multi Media III (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF MULTIMEDIA II AND GRAPHIC DESIGN I

Dover Area School District
Curriculum Cover Sheet

Multimedia III focuses on advanced content development, editing, and project leadership. Students will plan, coordinate, and manage multimedia projects while ensuring that information is communicated clearly and effectively through visual and digital media. Students will refine their skills in video editing, graphic design, photography, and visual storytelling while taking a greater role in directing productions and managing project workflows. Emphasis will be placed on audience analysis, content organization, and the integration of graphics, photography, video, and typography to create engaging media products. Students will continue to build a professional portfolio while demonstrating increasing independence, creativity, and technical proficiency. ***Attention will be focused on being sure all skills on the CAA task list have been acquired and that students are prepared for the NOCTI exam.***

843 - Multi-Media IV (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF MULTIMEDIA III

Multimedia IV emphasizes advanced multimedia production, creative problem-solving, and professional-level project development. Students will apply advanced production techniques to create professional-quality multimedia projects that integrate photography, videography, graphic design, motion graphics, and digital storytelling. Students will utilize Adobe Photoshop, InDesign, and Premiere as well as modeling software such as Adobe After Effects and Cinema 4D to create advanced visual effects, animations, motion graphics, and promotional media. Emphasis will be placed on creative direction, project management, client-focused design solutions, and producing work that meets professional standards. Students will complete portfolio-quality projects that demonstrate mastery of multimedia production techniques and effective visual communication. ***Attention will be focused on being sure all skills on the CAA task list have been acquired and that students are prepared for the NOCTI exam.***

848 - Graphic Design I (120 hours) Ⓗ

REQUIRED: 3-RING BINDER FOR A PORTFOLIO AND FOR CURRENT WORK

Graphic Design 1 is an introduction to graphic design, its history, processes, and applications. This project-based course serves as the foundation of the Commercial and Advertising Art Program of Study. Students will explore some of the major types of printing: screen printing, digital printing, and impactless printing, and the design requirements for each area while applying the Engineering Design Process and basic industry standards.Students will also be introduced to design as a form of visual communication for specific audiences and purposes.

Dover Area School District
Curriculum Cover Sheet

Students will begin developing a professional portfolio and be introduced to file management, workflow practices, and basic use of Adobe Illustrator.

849 - Graphic Design II (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF GRAPHIC DESIGN I

In this course, students will add to their portfolio as they gain experience in the various areas of graphic design. At this level, we will explore advanced printing techniques such as flexography, offset lithography, hydrographic printing, and heat-applied vinyl. Students will also be introduced to typography as a design element, color considerations, and begin developing presentation skills through critiques and formal project presentations where they will explain design decisions and refine their work based on feedback. Students will interpret design briefs and create solutions for specific audiences, and begin integrating multiple Adobe programs into cohesive projects. Industry standards and production workflows will continue to be emphasized, along with presentation and critique of student work. Field experiences with local printing facilities will further connect classroom learning to real-world applications. At the end of this course, they will have the opportunity to take the **Adobe Certification Exam** in Illustrator. ***Attention will be focused on being sure all skills on the CAA task list have been acquired and that students are prepared for the NOCTI exam.***

850 - Graphic Design III (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF GRAPHIC DESIGN II AND MULTIMEDIA I

Graphic Design 3 builds on prior course work with an emphasis on the integration of design, illustration, typography, and production techniques to create more complex and intentional visual communication. Students will be introduced to sketching and hand-drawing as part of the course. We will focus on multi-color printing and build on their knowledge of printing by working with spot colors, halftones, and duotones. Emphasis will be placed on branding and identity design, with projects that combine typography, imagery, and layout to communicate a unified message. Students will be expected to use multiple Adobe programs together within single projects, demonstrating an understanding of professional workflows. Students will present design concepts in a formal setting, participate in structured critiques, and revise their work based on feedback. Portfolio development will continue with a focus on selecting and refining high-quality pieces that demonstrate growth, creativity, and technical skill. ***Attention will be focused on being sure all skills on the CAA task list have been acquired and that students are prepared for the NOCTI exam.***

Dover Area School District
Curriculum Cover Sheet

851 - Graphic Design IV (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF GRAPHIC DESIGN III

In this course students will be expected to work more independently to produce professional-level design work for both print and digital media. Emphasis will be placed on advanced production techniques, including 4-color process printing, as well as specialty methods such as foil stamping, sublimation printing, and large-format design. Students will complete client-based or simulated real-world projects that require research, concept development, design execution, revision, and final production. Projects will involve full integration of the Adobe software and may include cross-media applications. A strong emphasis will be placed on developing a professional portfolio that demonstrates mastery of design principles, technical skills, and effective visual communication. Students will continue to follow industry-standard workflows, prepare files for a variety of output methods, and present their work in a professional manner. Students will also explore post-secondary opportunities and careers in graphic design and related fields. ***Attention will be focused on being sure all skills on the CAA task list have been acquired and that students are prepared for the NOCTI exam.***

Pacing Guide

PACING GUIDE

665 Web Page Design	**Associated Tasks**	**120 Hours**
Internet & Web Basics (How the web works, browsers, files, URLs)	104, 504, 507, 509, 510, 511, 512, 907, 910	8 hours
HTML Page Structure (Tags, semantic structure, content elements)	202, 504, 603	12 hours
Nesting & Page Organization (Containers, structure, valid HTML)	504, 510, 511, 603, 611	10 hours
CSS Selectors & Specificity (Classes, IDs, targeting, cascade)	603	12 hours
Box Model & Visual Design (Spacing, color, typography, contrast)	401, 402, 602, 603, 611, 703, 704	12 hours
Layout & Navigation (Multi-page sites, menus, consistency)	509, 603	14 hours
Design Review & Dev Tools (Debugging, accessibility, performance)	202, 603	10 hours
Intro to JavaScript (Variables, functions, events, DOM basics)	202, 512, 603, 611	12 hours
Forms & Validation (User input, feedback, basic validation)	512, 603	10 hours
Final Web Project & Presentation (Full site build + presentation)	512, 603, 901, 907, 908	20 hours

836 - Digital Photography	**Associated Tasks**	**120 Hours**
Tools / Equipment 10	201, 202, 509, 801, 907	13 hours
Camera Use 15	202, 509, 510, 511, 801	20 hours
History of Photography 2	101, 907, 908	4 hours
Rules of Composition 20	611, 802, 804	26 hours

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Photo Editing 23	401, 402, 503, 507, 508, 510, 511, 609, 704, 804	30 hours
Studio Lighting / Exposure 15	401, 802, 803, 804, 806	20 hours
Matting 5	202, 205, 609, 611	7 hours

840 - Multi Media I	**Associated Tasks**	**120 Hours**
Intro to Multi Media/History	101, 104, 510, 511, 601, 607, 609, 704, 805, 906, 908	5 hours
Elements & Principles of Design	602	10 hours
InDesign Basics	502, 503, 510, 511, 602, 603, 604, 608, 609,	10 hours
Intro to Journalism	104, 907	15 hours
Intro to Photography	509, 510, 511, 609, 801, 802, 804, 805,	15 hours
Intro to Photoshop	502, 507, 509, 510, 511, 609,	20 hours
Photojournalism	502, 507, 509, 510, 511, 609, 801, 802, 804, 805,	15 hours
AI in Photography	907, 910	5 hours
Intro to Lighting and Camera Modes	202, 801, 803, 804, 806,	10 hours
Final Project	901, 908	15 hours

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841 - Multi Media II	**Associated Tasks**	**120 Hours**
Review		15 hours
Intro to Videography	202, 509, 510, 511, 609, 803,	25 hours
Journalism (Basic)	104, 907	25 hours
Photography	509, 510, 511, 609, 801, 802, 804, 805	30 hours
Final Project	901, 908	25 hours

842 - Multi Media III	**Associated Tasks**	**120 Hours**
Review		15 hours
Videography (Intermediate)	202, 509, 510, 511, 609, 803,	20 hours
Journalism (Intermediate)	104, 907	20 hours
Course Level Independent Projects	101, 504, 509, 508, 510, 602, 603, 608 609, 703, 704, 801, 803, 806, 908	40 hours
Final Project	901, 908	25 hours

843 - Multi-Media IV	**Associated Tasks**	**120 Hours**
Review		15 hours
Videography (Advanced)	202, 509, 510, 511, 609, 803,	20 hours
Journalism (Advanced)	104, 907	20 hours
Course Level Independent Projects	101, 504, 509, 508,	40 hours

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	510, 602, 603, 608 609, 703, 704, 801, 803, 806, 908	
Final Project	901, 908	25 hours

848 - Graphic Design I	**Associated Tasks**	**120 Hours**
Intro to Graphic Design	101, 303, 305, 401, 402, 505,	5 hours
Adobe Illustrator Basics	401, 402, 505	15 hours
Elements & Principles of Design	303, 305,	5 hours
Vinyl	104, 303, 305, 501, 505,	15 hours
Promotional	104, 303, 305, 401, 402, 501, 505,	15 hours
Safety	201, 202, 203, 204, 205, 206	5 hours
Screen Printing	104, 303, 305, 501, 505,	15 hours
Flexography	201, 203, 204, 603, 604, 607, 609,	15 hours
Offset Lithography	201, 203, 204, 603, 604, 607, 609,	15 hours
Final: Portfolio	901, 908	15 hours

849 - Graphic Design II	**Associated Tasks**	**120 Hours**
Review & Practice		5 hours
Hydrographics	201, 203, 204, 603,	10 hours

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	607,	
Gravure/Intaglio	201, 203, 204, 603, 604, 607, 609	13 hours
Intro to InDesign	201, 202, 503, 510, 511, 608, 703,	12 hours
Flexography & Offset Lithography (Intermediate)	201, 203, 204, 603, 604, 607, 609,	10 hours
Adobe Illustrator (Intermediate)	201, 202, 401, 505, 510, 511, 610,	10 hours
Screen Printing (Intermediate)	201, 203, 204, 401 603, 604, 607, 609, 610,	10 hours
Intro to Technical Illustration	201, 301, 302, 303, 304, 305,	5 hours
Typography	701, 702	5 hours
Color Theory	403	5 hours
3D Package Design	402, 506, 602, 603, 604, 606, 609, 611, 704,	20 hours
Final: Printing Process Presentation	602, 604, 607, 902	15 hours

850 - Graphic Design III	**Associated Tasks**	**120 Hours**
Review & Practice		5 hours
Technical Illustration	201, 301, 302, 303, 304, 305, 306, 307, 401	10 hours
Adobe Illustrator (Advanced) Halftones	201, 202, 401, 506, 510, 511, 610,	10 hours
Product Photography/Intro to Photoshop	202, 502, 507, 509, 510, 511, 609, 801, 802, 804, 805,	15 hours

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Logo Development	201, 301, 302, 303, 305, 306, 307, 401, 402, 501, 506, 509, 510, 511, 603, 604,605, 704, 909	20 hours
Course Level Independent Projects	201, 202, 204, 603, 604, 608, 609, 610, 611,	35 hours
Final: Marketing Montage	201, 202, 204, 504, 506, 507, 510, 511, 602, 607, 608, 609, 611, 902, 908	25 hours

851 - Graphic Design IV	**Associated Tasks**	**120 Hours**
Review & Practice		5 hours
Technical Illustration	201, 301, 302, 303, 304, 305, 306, 307, 401	10 hours
Typography (Advanced)	701, 702, 703, 704	10 hours
Logo Research & Design	201, 301, 302, 303, 305, 306, 307, 401, 402, 501, 506, 509, 510, 511, 603, 604, 605, 704, 909	10 hours
Adobe Illustrator (Advanced)	201, 202, 401, 506, 510, 511, 610,	10 hours
Interactive Package Design	402, 506, 602, 603, 604, 606, 609, 611, 704,	20 hours
CMYK Printing	402, 403	10 hours
Course Level Independent Projects	201, 202, 204, 603, 604, 608, 609, 610, 611,	35 hours

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NOCTI Prep		10 hours

Task List (From Google Sheets)

Competency Task List – Secondary Component

Commercial & Advertising Art CIP 50.0402

High School Graduation Years 2025, 2026, 2027

100 Orientation

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
101	Investigate career paths and occupational requirements within the profession.	Digital Photography Graphics I-II	Career options related to CAA	Students planning to enter the Commercial Advertising Art profession should know the career options and pathways to completion for optimal success following high school graduation.	Communicate various aspects of a specific career	Career Poster (GD1, MM1) Career Research Project (GD2)
102	RESERVED	-				
103	RESERVED	-				
104	Apply copyright laws in communication.	Multimedia I Graphics I-II Web Page Design	Purpose of Copyright Laws	Students must understand the impact of copyright laws and their impact on the profession.	Create logos and designs for projects that comply with copyright law	Copyright RATE (MM1)

200 Safety

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
201	Follow safety protocols related to ergonomics.	Multimedia I Graphics I-II	Define: ergonomics, Basic use of computer, mouse and keyboard, Basic use of computer, mouse and	Ergonomics is important in Graphic design and for operating equipment in the graphic Communications	Handle and operate equipment in the graphics lab safely and efficiently, set-up equipment and	

			keyboard, Basic Use of Offset press, Basic Use of DSLR and video Cameras, Basic use of hand tools: Layout, cutting weeding, etc.	environment	workstations to be ergonomic and efficient to avoid injury and/or fatigue	
202	Follow safety requirements for use of hardware, software, and equipment.	All Courses	Parts of a PC and our iMac computer, safety rules for Various tool or machine in the graphics lab required for Graphics 1 Projects and activities, Basic use and application of Computer software, potential hazards associated with the various tools and equipment used for Level 1 Graphic Classes, Potential hazards associated with improper use of computers, software, and related electronic equipment	There are consequences for improper use of computer hardware, software and electronic equipment, It is in their best interest to use these things safely	Use computers on a daily basis to access programs, complete class work and to operate related equipment such as: laser printer, Xante Enpress, vinyl cutter, mimaki printer, large format printer	Adobe Illustrator Assignments (All levels of GD) InDesign Assignments (GD 2-4, All levels of MM) Photoshop Assignments (All levels of MM) Basic Camera Parts Assignment (MM1) Photography Assignments (All levels of MM, DP)
203	Use and maintain hand tools following established safety protocols.	Graphics I-V	Tools related to graphic design and graphic communications, rules and guidelines for each of tools in the graphics lab required to complete level 1 Graphics Design projects	potential hazards related to each of the tools, how to handle and use each of the tools	Properly use each of the tools required to complete Level 1 graphic design projects	Text Mask (GD 1) Gravure/Ingalio Projects (All levels of GD) Photo Matting (All MM Levels, DP)

204	Use, store, and dispose of paints, solvents, and chemicals according to OSHA regulations.	Graphics I-V	How to locate and read SDS/MSDS, Specific hazards related to the various paints, solvents and chemicals in our graphics lab, Proper use and application for each of the types of paint, solvents and chemicals in our graphics lab, Environmental vs personal hazards. **General Purpose:** Rubber cement, spray adhesive, Denatured Alcohol, Hand Cleaner. **Screen Printing:** Screen Cleaner, Stencil film remover (liquid and paste), Dehazer, Degreaser, Mesh Prep, Screen opener, Emulsion/stencil film, Screen opener, Toner Aide, Plastisol Ink, Hand cleaner, spot remover fluid, Flash tack/spray, adhesive "Offset Lithography, Press Wash, Rubber Based ink, fountain solution, Padding Cement" "Hydrographic Printing, Denatured Alcohol, Activator, Spray enamel, Clear Coat" "Rubber Stamp/Flexographic printing, Toner Aide, Photopolymer Resin, Aniline inks, Detergent. **Gravure Printing:**	the impact of improper use and/or storage of paints, solvents and Chemicals, OSHA and OSHA guidelines are in the best interest of themselves as well as environment, Proper use and application for each type of paint, solvent or chemical	Demonstrate proper use and dispose of various paints, inks, solvents and chemicals to complete level 1 graphic design projects and activities: Screen printing, offset lithography, hydrographic printing, rubber stamp production, Gravure Printing	Safety Test (GD1) Lab Maintenance (All levels of GD) Screen Printing Projects (All levels of GD) Offset Lithography Projects (All levels of GD) Flexography Projects (All levels of GD) Gravure/Intaglio Projects (All levels of GD) Hydrographic Projects (All levels of GD)

			Water-based inks			
205	Follow cutting procedures using established safety protocols.	Digital Photography Multimedia I-IV Graphics I-V	Rules and procedures for using the rotary paper cutter, scissors, guillotine style paper cutter, X-acto knife, padding knife, mat cutter and Paper Shear.	Hazards associated with each of the cutting tools and machines	Safely use the various cutting tools and machines to complete level 1 graphic design projects	Text Mask (GD 1) Photo Matting (All MM Levels, DP)
206	Investigate hazard communication, environmental, and SDS laws.	Graphics II-III	SDS/MSDS - location and purpose, Symbols and signage in the Graphics lab	There are specific instructions and information on how to use the tools, supplies and equipment in the graphics lab, These rules are to be followed for their own safety as well as the safety of others.	Complete the various level 1 graphic design projects by properly following the instructions and procedures for each workstation or process	Safety Test (GD1)

300 Drawing and Illustration

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
301	Draw using perspective.	Graphics II	Types of linear perspective: 1pt, 2pt. -vanishing point -vertical vs. depth lines Isometric-oblique and perspective drawing	How to represent 3 dimensional objects on a flat or 2-dimensional substrate	Complete various perspective, isometric and oblique sketches of 3-dimensional objects	Technical Illustration Assignments (GD2-4) 3D Package Design (GD2) 3D Interactive Package Design (GD4)
302	Draw basic geometric and organic forms showing texture and tone.	Graphics II	Definition of Texture, tone, shade vs shading, tint, texture vs. pattern, cross hatching / halftone / stippling, organic vs. geometrics, fundamentals of pencil and lead (hardness)	the various tools, terminology and techniques and how they relate to graphic design	Use geometric and organic forms within designs that they will use for each of the various types of printing processes.	Technical Illustration Assignments (GD2-4) 3D Package Design (GD2) 3D Interactive Package Design (GD4)

303	Draw line art.	Graphics II	Definition of Line art vs continuous tone images	various ways to produce line art	Create line art for the purpose of screen printing, flexography offset lithography and gravure printing	Basic Drawing Assignments (GD1, MM1) Design Challenge #1&2)GD1) Technical Illustration Assignments (GD2-4) 3D Package Design (GD2) 3D Interactive Package Design (GD4)
304	Apply anatomy concepts in drawing.	Graphics II-III	Anatomical proportions, contour lines, continuous tone	The importance of anatomical and human figures in advertising and design	reproduce image of human figures by tracing, sketching, or rendering, use human anatomy and figures in advertising and design solutions, use the appropriate tools and software to product posterization of a person (head and shoulders)	Technical Illustration Assignments (GD2-4)
305	Draw from direct observation.	Graphics II-V	Basic Drawing tools, drawing techniques	The importance and role that drawing plays in graphic design	Practice and apply drawing skills by completing creative drawing activities, use drawing to communicate and develop our design ideas	Basic Drawing Assignments (GD1, MM1) All Design Challenges (GD1) Technical Illustration Assignments (GD2-4)
306	Produce illustrations using various media.	Graphics II-V	illustration vs drawing vs sketching vs rendering, Adobe Illustrator: tools and techniques, Adobe3 Photoshop: basic tools and techniques	tools and techniques required to produce a quality illustration	Use Adobe Illustrator to finalize your designs for the purpose of reproducing them with the various major printing processes, use adobe Photoshop to produce a realistic illustration of a person with "super human power, use	Technical Illustration Assignments (GD2-4) 3D Package Design (GD2) 3D Interactive Package Design (GD4)

					adobe photoshop to effectively combine elements from 2 different photos, use adobe Photoshop to create an artistic background	
307	Illustrate using value.	Graphics II-V	Definition of value	terminology related to the value of color, tools and techniques used to create various values	Create a gradient blend to fill a shape in adobe illustrator, convert a photograph into a halftone, add shade or shadow to an object in AI	Technical Illustration Assignments (GD2-4)

400 Color Theory and Application

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
401	Apply the structure of color (hue, saturation, brightness) to generate color solutions.	All Courses	hue vs -tone vs shade - tint vs saturation	How changing hue, saturation, or brightness alters the mood or impact of a color. How to balance these elements to create visually appealing color solutions. How color choices influence perception, readability, and aesthetics in design.	Create a robot using basic shapes in Ai, Apply an appropriate color scheme, adjust tint, hue, exposure, and brightness of photo in Photoshop, use color in various applications of design (poster, flyer, booklet).	DC#3 (GD1) Text Mask (GD1) Technical Illustration Assignments (GD2-4) 3D Package Design (GD2) 3D Interactive Package Design (GD4)
402	Apply appropriate color schemes to generate design solutions.	All Courses	Definition of Color scheme, theme/unity/harmony	color can impact a feeling or mood of a piece, specific combination of colors impact the effect of a design	Create a robot using basic shapes in Ai, Apply an appropriate color scheme, make a manual pate-up of a poster that illustrates understanding of unity and	DC#3 (GD1) Text Mask (GD1) Technical Illustration Assignments (GD2-4) 3D Package Design (GD2)

					color schemes, create a display card for a product, use a color scheme and a layout that coordinates with the product	3D Interactive Package Design (GD4)
403	Identify color models including additive and subtractive color.	Multimedia I Graphics II-III	The primary colors for additive (RGB) and subtractive (CMY/CMYK) color models. The difference between additive and subtractive color mixing. Common uses of RGB and CMYK color models (e.g., digital screens vs. print).	How additive color mixing combines light to create different colors. How subtractive color mixing combines pigments or inks to create different colors. Why certain colors appear differently in digital media versus print media. How understanding color models affects design and visual communication.	Apply the correct color model for a given medium (e.g., RGB for screen, CMYK for print).	Color Theory Projects (GD2) Multi-color Screen Printing (GD2-4)

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
501	Execute image scanning procedures.	Multimedia I Graphics I-II	Proper use of scanning device, flat bed or app on iPad.	Proper file formats and advanced settings to yield best results	-Import a scanned image into adobe illustrator for use as a design element -import scanned image into adobe illustrator to be used as a reference/template -import scanned image into illustrator and convert it to a vector based image.	All Design Challenges (GD1)

502	Identify the properties of vector and raster images.	Multimedia I Graphics I-V	characteristics of a vector image vs. a raster image	the impact that the type of image has on its ability to be reproduced or used for various printing processes.	Create vector based images with Adobe Illustrator -work with raster and vector based images in the various printing processes	All Design Challenges (GD1)
503	Utilize basic functions of a page layout software.	Digital Photography Multimedia I Graphics I	basic function of adobe InDesign as a page layout program	the importance and benefits of a page layout program	Use adobe InDesign to produce items for the purpose of being printed	InDesign Assignments (GD2)
504	Utilize intermediate functions of a page layout software.	Digital Photography Web Page Design Multimedia II Graphics II-V	Application of some of the finer/more advanced tools and techniques with	The importance and benefits of knowing the finer points of a page layout program	Use adobe InDesign to produce multi page items for the purpose of being printed	InDesign Assignments (GD2-4)
505	Utilize basic functions of a vector-based drawing program.	Graphics I-V	Basic tools and techniques for working with a vector based drawing program	The importance and benefits of vector-based graphics	Use Adobe Illustrator to produce logos and designs to be printed	Adobe Illustrator Activities (GD1) All Design Challenges (GD1) Offset Lithography (GD1) Flexography (GD1) Digital Printing Projects (GD1)
506	Utilize intermediate functions of a vector-based drawing program.	Graphics I-V	Application and use of more complex tools and techniques within a vector based program	The benefits and functionality of vector-based graphics	Use Adobe Illustrator to produce complex logos and designs to be printed, including multi-color and CMYK separations	Adobe Illustrator Activities (GD2-4) Multi-color Screen Printing (GD2-4) Offset Lithography (GD2-4) Flexofgraphy (GD2-4) Digital Printing Projects (GD2-4) 3D Package Design (GD2)

						3D Interactive Package Design (GD4)
507	Utilize basic functions of a raster-based image editing software.	Digital Photography Web Page Design Multimedia I Graphics I-V	Basic tools and techniques for working with a raster-based editing program	the application and benefits of a raster-based editing program	Use adobe Photoshop to edit photos and produce graphic images	3D Package Design (GD2) 3D Interactive Package Design (GD4) Photoshop Assignments (All levels of MM, DP)
508	Utilize intermediate functions of a raster-based image editing software.	Digital Photography Multimedia II-IV Graphics II-V	Application and use of more complex tools and techniques within a raster-based program	the application and functionality of a raster-based editing program	Use adobe Photoshop to edit photos and produce graphic images and refine them for contests and reproduction purposes	3D Interactive Package Design (GD4) Photoshop Assignments (GD3-4)
509	Utilize use of input, output, and storage devices.	All Courses	Proper use and application of various input, output and storage devices	The importance of Safe and efficient use of input, output and storage devices.	Use iMac computers on a daily basis in coordination with various input sources and a variety of printers.	Product Photography (GD3-4) Photography Assignments (All levels of MM, DP) Broadcast Assignments (All levels of MM) Videography Assignments (All levels of MM)
510	Utilize different file formats.	All Courses	How to recognize and specify various file formats	each file format has a specific purpose and ideal applications	Import appropriate files for the intended application –Export or save files in their appropriate format based on the intended application	Adobe Illustrator Activities (GD1-4) All Design Challenges (GD1) InDesign Assignments (GD2-4) 3D Package Design (GD2) 3D Interactive Package Design (GD4) Product Photography (GD3-4) Photoshop Assignments

						(GD3-4, All levels of MM, DP) Photography Assignments (All levels of MM, DP) Videography Assignments (All levels of MM) Broadcast Assignments (All levels of MM)
511	Organize and manage digital files.	All Courses	How to create folders and subfolders	importance of file management and how to effectively store and arrange files	Save and export files to specific locations so they can be retrieved for future application	Adobe Illustrator Activities (GD1-4) All Design Challenges (GD1) InDesign Assignments (GD2-4) 3D Package Design (GD2) Marketing Montage (GD3) 3D Interactive Package Design (GD4) Product Photography (GD3-4) Photoshop Assignments (GD3-4, All levels of MM) Digital Printing Projects (All levels of GD) Photography Assignments (All levels of MM, DP) Videography Assignments (All levels of MM) Broadcast Assignments (All levels of MM)

512	Investigate basic functions of web or mobile design software.	Web Page Design	Basic function of web page design software	How to add, manage and manipulate content within a web page	Create a web page as a "portfolio" of the work that they have done in class	Internet & Web Basics (WPD) All Web Page Design Assignments (WPD)
600 Design, Layout, and Production						
Item	**Task**	**Secondary Course Crosswalk**	**Know**	**Understand**	**Do**	**Assessment**
601	Research the history of advertising design.	Multimedia I Graphics I-V	The Key Historical events of Advertising design	the importance and impact of the history of Advertising Design	Create a presentation of a specific event in the history of Advertising Design -Research and create a presentation of how history impacted the development of logo design	Logo Research & Design (GD3) Historical Event Assignments (MM1)
602	Apply elements and principles of design.	Web Page Design Multimedia I-IV Graphics I-V	The fundamental elements and principles of design	how the elements and principles of design impact the effectiveness of a composition	Use elements and principles of design to solve a variety of Design challenges	Collage #1 & 2 (GD1, MM1) Elements in an Ad (GD1, MM1) Principles of Design Activity (GD1, MM1) All Design Challenges (GD1) InDesign Assignments (GD2-4) 3D Package Design (GD2) 3D Interactive Package Design (GD4) Digital Printing Projects (All levels of GD)
603	Interpret a creative or design brief.	Web Page Design Multimedia I-IV	Terminology and purpose of a design brief	how to interpret and apply information in a design brief	Refer to a design brief for each major project to determine specific requirements and	All Design Challenges (GD1) Robot Adobe Illustrator Assignment (GD1)

		Graphics I-V			specifications of the design challenge	InDesign Assignments (GD2-4, All levels of MM) 3D Package Design (GD2) Marketing Montage (GD3) 3D Interactive Package Design (GD4) InDesign Assignments (GD2-4, All levels of MM)
604	Produce thumbnails, roughs, and comprehensive.	Multimedia I Graphics I-V	Purpose and function of each type of sketch/drawing	the importance of each type of drawing/sketch in the development of a design or composition	Use thumbnail sketches, rough layouts and Comprehensive layouts to develop design solutions to various design challenges	All Design Challenges (GD1) Multi-color Screen Printing (GD2-4) Offset Lithography Projects (All levels of GD) Flexography Projects (All levels of GD) Gravure/Inaglio Projects (All levels of GD) Digital Printing Projects (All levels of GD) 3D Package Design (GD2) 3D Interactive Package Design (GD4) Autobiography Page (MM1) Beak Speak (All levels of MM)
605	Design a logo.	Graphics II-III	purpose and function of a logo	characteristics of an effective logo	-refer to various sources as points of inspiration -apply elements and principles of design	Logo Research & Design (GD3) Client Based Logo Design (GD4)

					-use design process to develop logo design -apply drawing techniques to create a final version of a logo	
606	Create a design for a 3D package.	Graphics II-IV	layout and design principles drawing tools and techniques measuring and layout techniques Folding, scoring and perforating tools and techniques	the role and impact that the package has on the promotion, delivery and sales of a product	Create a display card for an existing Product(G1) Create a 3D package for an existing product (G-2) Create an interactive package for an existing product (G-3) Create a creative,interactive package or "informational mailer" (G4)	3D Package Design (GD2) 3D Interactive Package Design (GD4)
607	Utilize basic knowledge of printing processes.	Graphics I-V	knowledge of the major printing processes	which printing process is best suited for the intended purpose/product	Create logos and designs to be printed using each of the major printing processes: -Impactless printing -offset Lithography -Screen Printing -Relief printing/Flexography -Gravure Printing -Vinyl Graphics -Hydrographic Printing -large format printing -Digital Printing	All Design Challenges (GD1) Multi-color Screen Printing (GD2-4) 3D Package Design (GD2) Marketing Montage (GD3) 3D Interactive Package Design (GD4) Offset Lithography Projects (All levels of GD) Flexogrpahy Projects (All levels of GD) Gravure/Intaglio Projects (All levels of GD) Hydrographic Projects (All levels of GD) Digital Printing Projects

						(All levels of GD, All levels of MM)
608	Design promotional materials.	Multimedia I-IV Graphics I-V	Principles of design The design Process	the effect of design elements and how they impact the message being delivered Importance of sending the intended message appealing to a specific audience	Create Infographics to communicate information from their research Create support graphics for the morning announcements (MM1-2) Produce pamphlets and flyers that promote a company or business (G2) Design, layout and print business cards (G-4)	Deisgn Challenge #3 (GD1) Infographics (GD1) InDesign Assignments (GD2-4, All levels of MM) 3D Package Design (GD2) Marketing Montage (GD3) 3D Interactive Package Design (GD4)
609	Prepare files for output.	All Courses	proper file format and settings for various types of printers and display options	various types of displays and printing processes and their requirements	Change the settings and specifications of a file to be suitable for the intended output device: -laser printer -video monitor/digital display -Ink jet printer -plate maker, film maker, etc.	All Design Challenges (GD1) InDesign Assignments (GD2-4, All levels of MM) Multi-color Screen Printing (GD2-4) 3D Package Design (GD2) Marketing Montage (GD3) 3D Interactive Package Design (GD4) Offset Lithography Projects (All levels of GD) Flexogrpahy Projects (All levels of GD) Gravure/Intaglio Projects (All levels of GD) Hydrographic Projects (All levels of GD)

						Digital Printing Projects (All levels of GD) Photoshop Assignments (GD3-4, All levels of MM) Digital Printing Projects (All levels of GD) Photography Assignments (All levels of MM, DP) Videography Assignments (All levels of MM) Broadcast Assignments (All levels of MM)
610	Utilize printer’s marks and color separations.	Graphics II-V	required printer's marks and color separation requirements for each printing process	the benefits and importance of printer's marks and color separations for each type of printing/finishing process	Print color separations and printer's marks for a 2-color screen print (G2) Print color separations and printer's marks for a 3-color screen print (G3) Print color separations and printer's marks for a 4-color screen print (G4) Print color separations and printer's marks a full color CMYK screen print (G4-5) Print color separations and printer's marks on plates for a 2-color print on the offset press (G2) Print color separations and printer's marks on plates for a 3-color print on the offset press (G3) Print color separations and printer's marks on plates	Multi-color Screen Printing (GD2-4) Multi-color Offset Lithography Project (GD2-4) Multi-color Digital Prinitng Project (GD2-4) Digital Printing Projects (All levels of GD)

					for a 4-color print on the offset press (G4) Print registration marks for stickers to be printed on Mimaki Printer and cut to shape on the vinyl cutter (G2-3)	
611	Utilize basic math functions, proportions, and measurements.	All Courses	Units of measurement : inches, points and pica Measuring tools and techniques	how basic math skills and measuring are crucial for solving problems in layout and design	Create design elements to specific parameters using adobe illustrator Cut a 1.5" frame for a photo using the mat cutter (MM1, G1-3) Cut frames that are proportional to the photo size to create a 4 photo collage (MM1) Layout most efficient imposition for business cards (G3-4)	Adobe Illustrator Activities (GD1-4) All Design Challenges (GD1) Technical Illustrations Assignments (GD2-4) 3D Package Design (GD2) 3D Interactive Package Design (GD4)
700 Typography						

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
701	Identify the anatomy and classification of type.	Multimedia I Graphics I-III	Type fonts and families	The role of anatomy and classification of type and its effect within a composition	Use adobe illustrator to create a Text Mask (G1) Choose and control type fonts that coordinate with a quote (G1-G2, MM1)	Text Mask (GD1) Design Challenge 1&2 (GD1) Typography Activity (GD2, MM1)

					Choose and control type fonts for text to be cut using the vinyl cutter Coordinate text to match a graphic image to be made into a sticker using the vinyl cutter (G1) Choose appropriate type fonts for an autobiography page (MM1)	InDesign Assignments (GD2-4, All levels of MM)
702	Identify typographic styles.	Multimedia I Graphics I-III	Type fonts and typographic styles	How typographic styles impact the feel and effectiveness of a message	Identify and categorize typographic styles in examples of text or design. Select and apply appropriate fonts for a given project or message. Analyze how typographic choices affect readability and audience perception. Combine fonts effectively while maintaining visual harmony and clarity.	Typography Activity (GD2, MM1) InDesign Assignments (GD2-4, All levels of MM)
703	Manipulate type through character and paragraph formatting.	Web Page Design Multimedia III Graphics II-V	Character palettes and paragraph styles in Adobe Illustrator and InDesign	the application and use of paragraph and character formatting	Create a multipage document with consistent character and paragraph formatting	InDesign Assignments (GD2-4, All levels of MM)
704	Choose and apply an appropriate typeface.	All Courses	Typeface options	the importance of matching the typeface to the intended message and/or	Choose appropriate typeface for each design challenge to create unity	Posters (GD1, MM1) Infographics (GD1) All Design Challenges

				printing process.	and enhance the message	(GD1) Name Tag & Portfolio Dividers (GD1) InDesign Assignments (GD2-4, All levels of MM) 3D Package Design (GD2) Marketing Montage (GD3) 3D Interactive Package Design (GD4) Offset Lithography Projects (All levels of GD) Flexogrpahy Projects (All levels of GD) Gravure/Intaglio Projects (All levels of GD) Digital Printing Projects (All levels of GD)
800 Digital Photography						
Item	**Task**	**Secondary Course Crosswalk**	**Know**	**Understand**	**Do**	**Assessment**
801	Operate a digital camera and accessories.	Digital Photography Multimedia I-IV	Proper handling and control of camera settings	safe and effective control of a digital camera how various accessories work and can be used to enhance the quality of a photo	Participate in various photo scavenger hunts to practice proper handling the camera Use the camera and accessories to capture various photos with a specific intended outcome Use various accessories to enhance photos with a	Product Photography (GD3-4) Photoshop Assignments (GD3-4, All levels of MM) Photography Assignments (All levels of MM, DP) Videography Assignments (All levels

					specific intended outcome: Speed flash, strobe lights, filters, screens, reflectors and diffusers.	of MM) Broadcast Assignments (All levels of MM)
802	Compose a photograph through the lens.	Digital Photography Multimedia I-IV	Rules of photo composition	how following the rules of photo composition help to make photos more effective	Participate in various photo scavenger hunts to practice handling the camera	Product Photography (GD3-4) Photoshop Assignments (GD3-4, All levels of MM) Photography Assignments (All levels of MM, DP) Videography Assignments (All levels of MM) Broadcast Assignments (All levels of MM)
803	Determine lighting options and their effects.	Digital Photography Multimedia I-IV	Effects of light/lighting	control of lighting, and lighting methods	Complete various photo activities that illustrate ability to control the camera settings: ISO, Shutter speed, aperture	Product Photography (GD3-4) Photoshop Assignments (GD3-4, All levels of MM) Photography Assignments (All levels of MM, DP) Videography Assignments (All levels of MM) Broadcast Assignments (All levels of MM)
804	Stabilize a camera.	Digital Photography Multimedia I-IV	Proper handling and control of camera	importance and benefits of properly stabilizing a camera while taking photos	Participate in various photo scavenger hunts to practice proper handling the camera Use a tripod to stabilize a camera for various photography assignments	Product Photography (GD3-4) Photoshop Assignments (GD3-4, All levels of MM) Photography Assignments (All levels

						of MM, DP) Videography Assignments (All levels of MM) Broadcast Assignments (All levels of MM)
805	Download and manage digital images.	All Courses	file identification and locating files	how to locate, access and download digital files	Download photos from the camera or SD card to a folder on your computer Use adobe bridge to access photos and their metadata Use adobe bridge to create a contact sheet of selected photos	Posters (GD1, MM1) Infographics (GD1) All Design Challenges (GD1) Text Mask (GD1) InDesign Assignments (GD2-4, All levels of MM) 3D Package Design (GD2) 3D Interactive Package Design (GD4) Offset Lithography Projects (All levels of GD) Flexogrpahy Projects (All levels of GD) Gravure/Intaglio Projects (All levels of GD) Digital Printing Projects (All levels of GD, All levels of MM) Photoshop Assignments (GD3-4, All levels of MM) Photography Assignments (All levels of MM, DP) Videography Assignments (All levels

						of MM) Broadcast Assignments (All levels of MM)
806	Utilize principles of the exposure triangle.	Digital Photography Multimedia I-IV	The three components of the exposure triangle: aperture (f-stop), shutter speed, and ISO. How each component affects exposure (brightness) in a photograph. The basic relationship between aperture, shutter speed, and ISO. Common terminology associated with each element (e.g., depth of field, motion blur, noise/grain).	How adjusting one component impacts the others to maintain proper exposure. How aperture affects depth of field and creative composition. How shutter speed affects motion capture or blur. How ISO affects image brightness and noise. Why balancing all three elements is essential for achieving the desired photographic effect.	Adjust aperture, shutter speed, and ISO settings to properly expose a photograph. Make creative decisions using the exposure triangle to control depth of field, motion, and noise. Explain how changes in one element require compensations in the other two to maintain exposure.	Photography Assignments (All levels of MM, DP) Videography Assignments (All levels of MM) Broadcast Assignments (All levels of MM)
900 Professional Practices						
901	Prepare and present a portfolio.	All Courses	Purpose and functions of a portfolio	-using a portfolio to show evidence of their work -how a portfolio can show	Create and maintain an educational portfolio as an alternative to taking a	Portfolio (GD1) Marketing Montage (GD3)

				growth and progress -Importance of a professional Portfolio in obtaining a job or acceptance to a post-secondary school	written exam (graphics 1) Create a multi-media "Magazine" as evidence of your work in Multimedia 1 class Create an online Portfolio/web page to display your work in relation to Graphic Design and Advertising Art (G2-6)	Multimedia Magazine (MM1)
902	Prepare and present a visual concept presentation.	Graphics II	design process and presentation media	the importance of choosing correct presentation mode/media process of "pitching" a visual concept or design	Create a presentation that shows the history of a logo that has changed over time (G2)	Print Process Presentation (GD2) Logo Research & Design (GD3)
903	Estimate time, materials and cost for a project.	Graphics II-V	Material costs printing process and required work	variables that affect the time and materials required for a print job importance of accurately quoting a print job.	Complete a screen printing job of at least 12 shirts for a club, group or team. Estimate job costs and complete a project on the offset printing press Complete printing job for a customer other than yourself: include job costs and time estimate. Map out the marking period based on recommended time allotted for each project and complete those projects within the allotted time.	Client Based Logo Design (GD4) Mass Production Assignments (GD3-4)
904	RESERVED	-				

905	RESERVED	-				
906	Participate in critiques of commercial art projects.	Multimedia I Graphics I-V	process of providing constructive feedback	role of fomal and informal critiques importance of not giving or taking construcrtive criticism personally	Participate in an informal critique of a Poster for a quote created using Canva provide constructive feedback to another students work posted to a discussion in Schoology Participate in Logo design presentations and provide input to other students' presentations	Posters (GD1, MM1) Logo Research & Design (GD3) 3D Package Design (GD2) 3D Interactive Package Design (GD4)
907	Explore current industry trends.	All Courses	Careers and industry partners related to Graphic Design and advertising art	-the variety and range of jobs related to graphic design -job expectations and roles within the industry -job requirements or eligibility	Research a specific career related to graphic Design and create a poster showing specifics of the career Participate in a field trip of a company within the Graphics Industry Complete OSHA 10 or OSHA 30 hour training course	Graphic Communication vs Graphic Design Notes (GD1) 3D Package Design (GD2) 3D Interactive Package Design (GD4)
908	Demonstrate research, employability, and organizational skills.	All Courses	Key strategies for effective research (e.g., reliable sources, note-taking, citation). Common employability skills (e.g., communication,	How employability skills influence success in the workplace or academic settings. How organization impacts productivity, deadlines, and	Conduct research using credible sources and organize findings clearly. Demonstrate professional behaviors and communication in	Carer Poster (GD1, MM1) 3D Package Design (GD2) Print Process Presentation (GD2) Logo Research &

			teamwork, punctuality, professionalism). Methods for organizing tasks, time, and resources efficiently. Tools and technologies that aid research and organization (e.g., calendars, project management apps).	overall performance. The connection between these skills and career readiness.	academic or workplace scenarios. Plan and prioritize tasks effectively to meet deadlines. Use tools and strategies to maintain organization and efficiency in projects or assignments.	Design (GD3) Marketing Montage (GD3) 3D Interactive Package Design (GD4) Historical Events Assignments (MM1)
909	Create personal branding materials.	Graphics I-V	What personal branding is and why it's important. Types of personal branding materials (e.g., resumes, cover letters, portfolios, business cards, social media profiles). Design principles and formatting standards for professional documents.	How design, content, and presentation influence first impressions. How to tailor materials to different audiences or opportunities (e.g., job applications, networking). The relationship between consistency across branding materials and credibility.	Develop a resume, cover letter, or portfolio that highlights personal strengths and skills. Apply design principles and clear formatting to enhance readability and visual appeal. Review and revise materials to ensure accuracy, consistency, and alignment with personal brand goals.	Name Tag (GD1) Logo Research & Design (GD3)
910	Explore the importance of social media as it relates to employability.	All Courses	How social media can influence personal and professional reputation. The difference between personal, professional, and public content online. Basic social media etiquette and privacy	How employers may use social media to screen candidates. The impact of online presence on employability and professional opportunities. How social media can be	Evaluate and manage personal social media accounts to present a professional image. Create or enhance professional social media profiles that highlight skills, experience, and accomplishments.	Internet & Web Basics (WPD)

			considerations.	leveraged to network, build a personal brand, and showcase skills.	Use social media to research companies, industries, and professional networks. Apply strategies to engage positively and responsibly with professional communities online.	
1 Student Demonstrated Entry-Level Industry Proficiency as Indicated by (X)						

Dover Area School District
Curriculum Cover Sheet

CIP Code: 15.1202

CIP Title: Computer Technology

Planned Hours: 1320

CIP Description:

A program that prepares individuals to apply basic engineering principles and technical skills in support of professionals who use computer systems. Includes instruction in basic computer design and architecture, programming, problems of specific computer applications, component and system maintenance and inspection procedures, hardware and software problem diagnosis and repair, and report preparation.

Component Courses:

660 - Microsoft Office (120 hours)

Microsoft Office is a comprehensive course designed to teach students intermediate-level software applications using Microsoft Office. This course includes Word, Excel, PowerPoint, and the Internet. In addition, students will complete integrated projects and internet research tasks. Students will have the opportunity to earn a Microsoft Office Specialist credential through Certiport. These software application skills benefit students in all areas of life.

662 - Advanced Microsoft Office (120 hours)

Advanced Microsoft Office is a comprehensive course designed to teach students ***advanced-level*** applications in ***Microsoft Office.*** Students will have the opportunity to utilize and develop broader skills learned in Microsoft Office. Emphasis is placed on the following advanced applications: Word, PowerPoint, and Excel. Internet search strategies will be used to gather/collect information from websites to create and enhance student projects. Priority will focus on the integration of software packages and student application projects. Skills learned in the advanced course will benefit students in their academic, personal, and business lives.

Dover Area School District
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665 - Web Page Design (120 hours)

In this course, students will gain a foundational knowledge of website creation and coding.. Students will be able to apply their knowledge for the planning, designing, and development of their own websites over the course of the semester. By the end of this course, students will be comfortable creating, coding, and posting basic HTML and CSS files to the Internet. Critical thinking will be encouraged through class interactions, assignments, and projects.

944 - Honors Introduction to Programming (120 hours)ⓈⓂ

Primarily using Python, this course aims to develop computational thinking, problem-solving methods, and algorithm development that will also transfer to learning other computer languages. The course includes procedural and data abstractions, program design, debugging, testing, and documentation. This course will generate an overall understanding of potential career paths that utilize computing and introduce professional tools that foster creativity and collaboration. Basic computer knowledge is required for this course.

945 - IT Essentials I (120 hours)

IT Essentials I introduces students to core technology concepts and foundational digital skills while building confidence and curiosity about careers in computing. This course provides a broad survey of the major domains within the Computer Technology program and prepares students for success in advanced coursework. Students will explore productivity and collaboration software, computer hardware components and functions, operating systems and basic software management, digital citizenship, safe computing habits, and media literacy. In addition, students will learn keyboarding and essential workplace technology skills. The course will introduce basic networking principles, security and internet fundamentals, and software development concepts (languages, Data types, organization techniques). Hands-on activities and real-world scenarios help students develop troubleshooting skills and foundational IT knowledge. This course prepares students for the CompTIA Tech+ Certification exam, providing the essential baseline for entry-level IT competencies. This course is the entry point for all courses within the program.

947 - Honors Game Design and Simulation (120 hours)ⓈⓂ

REQUIRED: SUCCESSFUL COMPLETION OF HONORS INTRODUCTION TO PROGRAMMING

Students will understand historical elements of game design, genres, utilize documentation techniques, testing and produce basic games, and improve many iterations of developed games. Students will be using design thinking processes and critical problem-solving to obtain an overall view of the gameplay experience and how that is implemented with various design

components. Practical hands-on applications include using a game design environment to create and implement simple games. Basic computer knowledge is required for this course.

948 - IT Essentials II (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF IT ESSENTIALS I, ROUTING & SWITCHING, HONORS INTRO TO PROGRAMMING. MAY BE TAKEN CONCURRENTLY WITH INTRO TO CYBERSECURITY.

IT Essentials II provides the advanced computer hardware, software, operating system, and troubleshooting knowledge required for industry-aligned entry-level IT support roles. Through hands-on labs and scenario-based problem solving, students will deepen their understanding of how computers function internally and how IT professionals diagnose and resolve technical issues. Major topics include: PC hardware architecture, assembly, and component-level troubleshooting, operating system installation, configuration, and maintenance, storage technologies and file systems, system utilities and command-line tools, virtualization fundamentals, device drivers, peripherals, and compatibility considerations, preventative maintenance and documentation, and professional IT workflows and customer service best practices. This course directly aligns with the CompTIA A+ Certification, preparing students to meet the expectations of modern IT help desk and technical support roles. It builds on the networking and programming foundations established in prior coursework to provide a comprehensive, career-ready skill set.

949 - Introduction to Networks (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF IT ESSENTIALS I

Introduction to Networks curriculum is a gateway to entry-level networking jobs and IT careers. In this class, students will cover the fundamentals of networking including configuring network switches, understanding protocols, and the OSI Model. Topics include the TCP/IP suite, subnetting, and Cisco IOS. This course aligns with the CompTIA Network+ Certification. Basic computer knowledge is required for this course.

952 - Introduction to Cybersecurity (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF INTRODUCTION TO NETWORKS AND IT ESSENTIALS I

Introduction to Cybersecurity introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Students will explore and utilize cutting-edge tools for defending network resources. This course aligns with the CompTIA Security+ Certification.

954 - Routing & Switching Essentials (120 hours)

REQUIRED: SUCCESSFUL COMPLETION OF INTRODUCTION TO NETWORKS AND IT ESSENTIALS I

This course describes the architecture, components, and operations of routers and switches in a small network. Participants learn how to configure a router and a switch for basic functionality.

Dover Area School District
Curriculum Cover Sheet

This course aligns with the Cisco CCNA 200-301 Certification and prepares students to obtain their TestOut Routing and Switching Pro Certification.

Pacing Guide

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660 - Microsoft Office	**Associated Tasks**	**120 Hours**
Unit 1: Hardware & the Internet	115, 406, 501, 511, 512, 513	8 hours
Unit 2: Word - Flyers, Letters, and Reports	115, 601, 702, 708, 905, 1002, 1008	42 hours
Unit 3: Excel - Spreadsheets with Formulas and Charts	115, 601, 702, 708, 905, 1002, 1008	42 hours
Unit 4: PowerPoint - Presentations with Themes and Graphics	115, 601, 702, 708, 905, 1002, 1008	30 hours
Unit 5: Introduction to Simple Databases	115, 601, 702, 708, 905, 1002, 1008	8 hours

662 - Advanced Microsoft Office	**Associated Tasks**	**120 Hours**
Unit 1: Word - Watermarking, Forms, Merge, Templates	15, 601, 702, 708, 905, 1002, 1008	30 hours
Unit 2: Excel - Spreadsheets with Advanced Formulas	15, 601, 702, 708, 905, 1002, 1008	40 hours hours
Unit 3: PowerPoint - Presentations with Embedded Elements	15, 601, 702, 708, 905, 1002, 1008	25 hours
Unit 4: Databases & Forms	15, 601, 702, 708, 905, 1002, 1008	25 hours

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665 - Web Page Design	**Associated Tasks**	**120 Hours**
Internet & Web Basics (How the web works, browsers, files, URLs)	403, 405, 404	8 hours
HTML Page Structure (Tags, semantic structure, content elements)	405, 406, 1006	12 hours
Nesting & Page Organization (Containers, structure, valid HTML)	405, 1006	10 hours
CSS Selectors & Specificity (Classes, IDs, targeting, cascade)	405, 406	12 hours
Box Model & Visual Design (Spacing, color, typography, contrast)	404, 407	12 hours
Layout & Navigation (Multi-page sites, menus, consistency)	405, 406, 1006	14 hours
Design Review & Dev Tools (Debugging, accessibility, performance)	404, 405, 601	10 hours
Intro to JavaScript (Variables, functions, events, DOM basics)	406, 704, 712	12 hours
Forms & Validation (User input, feedback, basic validation)	404, 406, 901	10 hours
Final Web Project & Presentation (Full site build + presentation)	1001, 1002, 1003, 1006	20 hours

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944 - Honors Introduction to Programming I	**Associated Tasks**	**120 Hours**
Programming Foundations (Variables, I/O, Expressions)	403, 405, 701, 702	12 hours
Data Types, Operators & Expressions	701, 704, 709	10 hours
Program Design & Planning (Pseudocode, Problem Solving)	1001, 1002, 1006	8 hours
Decision Making (Conditionals & Boolean Logic)	701, 704, 705	12 hours
Debugging, Code Style & Documentation	601, 605, 1006	10 hours
Loops & Iteration (While, For, Control Structures)	701, 704, 705	14 hours
Libraries & Modular Code (Math, Random, Built-ins)	701, 710	8 hours
Intro to Object-Oriented Concepts (Classes & Objects)	712, 701	8 hours
Graphics Programming & Event Loops (Game Foundations)	702, 704, 712	12 hours
Animation & User Interaction (Input, Collision, Events)	704, 705, 801	10 hours
Game Development Project (Application of Concepts)	1001, 1002, 1003, 1006	10 hours
Programming Careers, Collaboration & Capstone Reflection	1001, 1002, 1003	6 hours

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9XX - Honors Introduction to Programming II	**Associated Tasks**	**120 Hours**
Review of Programming I Concepts & Transition	701, 704, 705	6 hours
Lists & Iteration (For-Each, Indexing, Operations)	701, 704	14 hours
Advanced List Operations & Algorithms	601, 704, 705	10 hours
Strings as Data Collections & Manipulation	701, 704	8 hours
Tuples, Dictionaries & Data Structures	701, 704, 710	14 hours
Nested Data & Complex Data Modeling	704, 705	10 hours
Web APIs & External Data Integration	405, 801, 803	10 hours
User-Defined Functions & Code Organization	701, 710	12 hours
Scope, Parameters & Advanced Function Design	601, 602, 605	8 hours
Software Development Practices (Docstrings, Code Review, Teamwork)	1001, 1003, 1006	8 hours
Final Game / Application Project (Capstone)	1001, 1002, 1003, 1006	12 hours

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945 - IT Essentials I	**Associated Tasks**	**120 Hours**
Tech+ Concepts, Safety & Troubleshooting Foundations	101, 102, 103, 104, 105, 106, 107, 108, 112, 114, 115, 601, 712	18 hours
Tech+ Infrastructure: Hardware, Devices & Peripherals	501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 514, 515, 516, 517, 518	28 hours
Tech+ Applications, Software & Operating Systems	403, 405, 406, 701, 702, 703, 706, 709, 710	22 hours
Tech+ Networking & Internet Fundamentals	403, 405, 518, 606, 801, 802, 803, 804, 805, 807, 808	18 hours
Tech+ Security, Data Privacy & Digital Responsibility	404, 407, 901, 902, 903, 904, 905, 906, 907, 1004, 1005, 1006	18 hours
Tech+ Professional Skills, Documentation & Review	601, 602, 605, 1001, 1002, 1003, 1004, 1006, 1007	16 hours

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947 - Honors Game Design and Simulation	**Associated Tasks**	**120 Hours**
Foundations of Game Design & Probability	405, 404, 901, 1001, 1010	20 hours
Game History & Analysis	406, 1001, 1002, 1006	10 hours
Dice Game Design Lab	601, 605, 1002, 1003	10 hours
Card Game Design Lab	406, 601, 1002, 1006	10 hours
Board Game Systems & Balance	601, 605, 1002, 1010	12 hours
Analog Game Design Project (Prototype → Iteration)	601, 605, 1003, 1006	14 hours
Programming Foundations for Games (Python)	702, 704, 709, 712	14 hours
Pygame Fundamentals (Digital Game Systems)	704, 705, 710, 712	12 hours
Capstone Digital Game Project	601, 605, 1002, 1006, 1007	12 hours
Presentation, Playtesting & Reflection	1001, 1002, 1005, 1006	6 hours

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948 - IT Essentials II	**Associated Tasks**	**120 Hours**
A+ Core 1: Mobile Devices	510, 517, 604	10 hours
A+ Core 1: Networking	518, 606, 607, 801, 802, 803, 804, 805, 806, 807, 808	18 hours
A+ Core 1: Hardware	501, 502, 503, 504, 505, 506, 507, 508, 509, 511, 513, 514, 515, 516, 1007	22 hours
A+ Core 1: Virtualization & Cloud Computing	711, 712	8 hours
A+ Core 1: Hardware & Network Troubleshooting	512, 601, 602, 603, 604, 605, 606, 607, 705, 806	17 hours
A+ Core 2: Operating Systems	701, 702, 703, 704, 705, 706, 708, 709, 710, 712	18 hours
A+ Core 2: Security	404, 407, 901, 902, 903, 904, 905, 906, 907, 908	15 hours
A+ Core 2: Software Troubleshooting	602, 705, 708, 710	6 hours
A+ Core 2: Operational Procedures & Professionalism	101, 102, 103, 104, 105, 106, 107, 108, 112, 114, 115, 1001, 1002, 1003, 1004, 1005, 1006	6 hours

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949 - Introduction to Networks	**Associated Tasks**	**120 Hours**
Course Orientation, Lab Safety, and Network Equipment Handling	101, 106, 108, 114, 115, 606, 1001	6 hours
Network Fundamentals: What Networks Do, Types of Networks, and Internet Connectivity	403, 405, 801, 802, 803	10 hours
Network Devices, Media, Topologies, Ports, and Protocols	518, 801, 803, 805, 808	12 hours
Internet Services, IP Addressing Basics, DHCP, DNS, URLs, and Common Protocols	403, 802, 803, 806, 808	12 hours
Packet Journey Foundations: OSI/TCP-IP Models, Encapsulation, Ethernet, MAC Addresses, ARP, and Routing Concepts	803, 805, 806, 1006	12 hours
Cabling, Connectors, Network Tools, and Physical Layer Lab Skills	804, 606, 607, 805	10 hours
Wireless and SOHO Networking Basics	801, 802, 803, 805, 806, 807	10 hours
Linux Command Line and Raspberry Pi Network Services	703, 704, 705, 709, 710, 712, 808	12 hours
Build a Raspberry Pi Fake ISP: DNS, Web Services, Addressing, and Client Testing	802, 803, 806, 808, 1006	14 hours
Build and Test a RaspAP Router and SOHO Network	801, 802, 803, 805, 806, 807, 808	14 hours
Network Troubleshooting, Documentation, Team Build Checkoff, and Final Reflection	601, 606, 705, 806, 1001, 1002, 1003, 1006, 1009, 1010	8 hours

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952 - Introduction to Cybersecurity	**Associated Tasks**	**120 Hours**
Cybersecurity Foundations (CIA Triad, Risk, Threat Landscape)	901, 906, 1006, 1010	12 hours
Digital Citizenship, Ethics & Legal Responsibilities	404, 407, 901, 906, 1005, 1008	10 hours
Networking Fundamentals for Cybersecurity (Attack Surface & Data Flow)	801, 802, 803, 805, 807	14 hours
Systems, Hardware & Endpoint Security Basics	501, 504, 510, 712	10 hours
Operating Systems & Security Configuration	701, 703, 704, 705, 708, 709	14 hours
Threats, Vulnerabilities & Malware	902, 904, 905	12 hours
Identity, Access Management & Authentication	903, 907	8 hours
Network Security & Wireless Protection	802, 803, 805, 806, 807	12 hours
Incident Response & Basic Digital Forensics	601, 602, 605, 908	10 hours
Disaster Recovery, Business Continuity & Risk Management	909, 1006, 1010	8 hours
Security Tools, Monitoring & Defensive Strategies	606, 805, 806, 902	10 hours
Cybersecurity Careers, Teamwork & Capstone Project	1001, 1002, 1003, 1006	10 hours

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954 - Routing & Switching Essentials	Associated Tasks	120 Hours
Course Orientation, Lab Safety, Enterprise Equipment Inventory, and Rack/Lab Procedures	101, 106, 108, 114, 115, 606, 1009	6 hours
Network+ Foundations Review: OSI Model, Ports, Protocols, Devices, Media, and Topologies	518, 801, 803, 805	10 hours
IPv4/IPv6 Addressing, Subnetting, CIDR, VLSM, DHCP, DNS, and Gateway Configuration	802, 803, 806, 808	12 hours
Cisco IOS and Device Management: Console Access, SSH, Basic Configuration, Passwords, and Config Backups	703, 704, 705, 709, 902, 903, 907, 1006	10 hours
Switching Essentials: VLANs, Trunks, Access Ports, STP Concepts, Layer 2 Design, and Switch Documentation	803, 805, 806, 807, 808, 1006	14 hours
Routing Essentials: Static Routes, Default Routes, Inter-VLAN Routing, Router-on-a-Stick, and Layer 3 Switching Concepts	802, 803, 806, 807, 808	14 hours
Wireless and PoE Implementation: Cisco Aironet APs, SSIDs, Channels, Encryption, and Client Connectivity	802, 805, 806, 807, 808, 902	8 hours
Network Services and Servers: Dell PowerEdge Lab Services, DHCP/DNS/File/Web Services, Virtualization, and Network Resources	711, 713, 808, 1007, 1009	8 hours
Network Security and Hardening: VLAN Segmentation, ACL Concepts, Device Hardening, Wireless Security, and Acceptable Use	901, 902, 903, 905, 907, 1008	10 hours
Network Operations: Physical/Logical Diagrams, Cable Maps, IP Address Plans, Configuration Baselines, Monitoring, and Asset Inventory	606, 806, 1006, 1009, 1010	8 hours
Troubleshooting Methodology and Tools: CLI Commands, Cable Testing, Interface Status, Wireshark, Logs, and Layered Troubleshooting	601, 606, 705, 806, 905	8 hours
Final Network Design/Build Capstone: Multi-VLAN Routed Network Using Cisco, Dell, Ubiquiti, Wireless, and Server Equipment	801, 802, 803, 804, 805, 806, 807, 808, 1001, 1002, 1003, 1006	12 hours

Task List (from KUD Spreadsheet)

Competency Task List –
Secondary Component

Computer Technology/Computer Systems Technology
CIP 15.1202

High School Graduation Years 2026, 2027, 2028

100 Personal and Environmental Safety

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
101	Identify and prevent common causes of accidents and injuries in the workplace.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 954 - Routing & Switching Essentials	- The common causes of accidents and injuries in the workplace, such as slips, trips, falls, and manual handling. - The basic safety procedures and equipment for preventing accidents and injuries.	- The importance of identifying and preventing accidents and injuries to maintain a safe and healthy work environment. - How to assess the workplace and identify potential hazards.	- Regularly inspect the workplace for potential hazards, such as cluttered walkways, uneven flooring, and inadequate lighting. - Follow established safety procedures, such as wearing personal protective equipment and following manual handling guidelines. - Report any hazardous conditions or incidents to a supervisor. - Participate in safety training and updates.	Quiz/Unit Test/ Project
102	Wear personal protective equipment.	All Classes	- The different types of PPE, such as hard hats, safety glasses, and gloves. - The appropriate PPE for different tasks and hazards in the workplace.	- The importance of wearing PPE to protect against accidents and injuries in the workplace. - How to properly fit, use, and maintain PPE.	- Familiarize yourself with the PPE required for your job and tasks. - Properly fit and wear the required PPE at all times when performing hazardous tasks. - Regularly inspect and	Quiz/Unit Test/ Project

					replace PPE as needed. - Properly store PPE when not in use.	
103	Identify safety hazard symbols.	945 - IT Essentials I 948 - IT Essentials II	- The purpose of safety hazard symbols and the types of hazards they represent, such as toxic, flammable, and explosive. - The basic meanings and colors of common hazard symbols.	- The importance of recognizing and understanding safety hazard symbols to maintain a safe work environment. - How hazard symbols can be used to identify potential hazards and inform workers of safe handling and storage procedures.	- Regularly review and familiarize yourself with common hazard symbols and their meanings. - Look for and pay attention to hazard symbols in the workplace and on labels and containers. - Follow the procedures indicated by hazard symbols and obey warning signs.	Quiz/Unit Test/ Project
104	Follow Safety Data Sheets (SDS).	945 - IT Essentials I 948 - IT Essentials II	- What an SDS is and its purpose. - Where to find and access SDS for a specific chemical or product.	- The importance of following SDS for safe handling and use of chemicals or products. - The different hazards associated with a substance or product and how to recognize them.	- Read the SDS before using a new chemical or product. - Follow the instructions and precautions listed in the SDS. - Keep SDS in a accessible location for quick reference in case of emergency.	Quiz/Unit Test/ Project
105	Identify and select the type of fire extinguisher based on the type of fire.	945 - IT Essentials I 948 - IT Essentials II	- The different classes of fires and their causes. - The types of fire extinguishers and the fire class they are suitable for.	- The importance of using the correct type of fire extinguisher for each type of fire. - The potential dangers and risks of using the wrong type of fire extinguisher.	- Quickly identify the class of fire. - Select the appropriate type of fire extinguisher. - Use the fire extinguisher correctly and safely, following the manufacturer's instructions.	Quiz/Unit Test/ Project
106	Follow proper procedures when lifting and carrying heavy objects.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks	- The potential risks and hazards associated with lifting and carrying heavy objects. - The proper body mechanics for lifting and carrying heavy objects.	- The importance of following proper lifting and carrying procedures to prevent injury. - How to assess the weight and size of the object to determine the appropriate lifting technique.	- Plan and prepare before lifting, including clearing the path, using proper footwear, and asking for help if necessary. - Use the correct lifting technique, including keeping	Quiz/Unit Test/ Project

		954 - Routing & Switching Essentials			the object close to the body, using the legs to lift, and avoiding twisting and bending at the waist. - Ask for help if the object is too heavy or awkward to lift alone.	
107	Identify and implement proper disposal procedures based upon environmental impact and regulations.	945 - IT Essentials I 948 - IT Essentials II	- The different types of waste and their potential impact on the environment. - The local, state, and federal regulations for waste disposal.	- The importance of proper waste disposal to minimize environmental impact. - How to assess the type of waste and determine the appropriate disposal method based on regulations.	- Sort waste into categories, such as recyclables, hazardous waste, and general waste. - Research and follow the regulations for each type of waste. - Use appropriate disposal methods, such as recycling, safe disposal of hazardous waste, and properly disposing of general waste.	Quiz/Unit Test/ Project
108	Identify potential hazards when working with power supplies.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 954 - Routing & Switching Essentials	- The different types of power supplies and their potential hazards. - The basic safety precautions for working with power supplies.	- The dangers associated with electrical shock, fire, and other hazards. - The importance of following safety procedures when working with power supplies.	- Assess the power supply and identify potential hazards before use. - Follow the manufacturer's instructions and safety precautions. - Use proper protective equipment, such as insulated gloves and safety glasses. - Report any damaged or malfunctioning power supplies to a supervisor.	Quiz/Unit Test/ Project
	RESERVED (109-111)	-				

112	Configure a computer's power management settings to maximize energy efficiency.	945 - IT Essentials I 948 - IT Essentials II	- The different power management options available on a computer. - The impact of power management settings on energy consumption.	- The importance of maximizing energy efficiency to reduce costs and minimize environmental impact. - How to make changes to power management settings on a computer	- Open the power management settings on the computer. - Adjust settings such as screen timeout, sleep mode, and power plan to maximize energy efficiency. - Regularly review and adjust power management settings as needed. - Turn off the computer when not in use to minimize energy consumption.	Quiz/Unit Test/ Project
	RESERVED (113)	-				
114	Prevent electrostatic discharge conditions.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 954 - Routing & Switching Essentials	- The cause and potential consequences of ESD. - The basic safety procedures for preventing ESD.	- The importance of preventing ESD to protect sensitive electronic equipment. - How to reduce the risk of ESD by controlling the buildup of static electricity.	- Wear an ESD wrist strap or use ESD-safe handling techniques. - Work on an ESD-safe surface, such as a grounded mat. - Avoid activities that can generate static electricity, such as walking on carpet or wearing synthetic clothing. - Regularly check and replace ESD equipment as needed.	Quiz/Unit Test/ Project
115	Demonstrate proper ergonomic techniques.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 954 - Routing & Switching Essentials	- The basic principles of ergonomics, such as proper posture, positioning, and movements. - The common causes of ergonomic injuries, such as repetitive strain and awkward postures.	- The importance of ergonomics for preventing injury and promoting comfort and efficiency. - How to adjust workstations, tools, and techniques to reduce the risk of ergonomic injury.	- Assess the work environment and identify potential ergonomic hazards. - Adjust workstations and equipment, such as chairs, desks, keyboards, and mouse, to promote proper posture and positioning. - Use proper techniques, such as taking regular breaks	Quiz/Unit Test/ Project

					and alternating tasks, to reduce the risk of repetitive strain. - Pay attention to body mechanics, such as avoiding awkward postures and using proper lifting techniques.	

200 Reserved

300 Reserved

400 Internet Applications

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
	RESERVED (401-402)	-				
403	Identify the components of a uniform resource locator (URL).	665 - Web Page Design 944 - Honors Introduction to Programming I 945 - IT Essentials I 949 - Introduction to Networks	- The basic structure and purpose of a URL. - The common components of a URL, such as the protocol, domain, path, and query parameters.	- How a URL is used to locate and access web resources on the internet. - The relationship between the components of a URL and how they determine the location of a specific web resource.	- Inspect and understand the structure of URLs when accessing web resources. - Use the components of a URL, such as the domain and path, to determine the location and access web resources. - Modify and construct URLs as needed to access specific web resources.	Quiz/Unit Test/ Project
404	Identify processes for addressing prohibited content/activity, and privacy, licensing, and policy concepts.	665 - Web Page Design 945 - IT Essentials I 947 - Honors Game Design and Simulation	- The types of prohibited content/activity, such as illegal or unethical behavior, hate speech, and personal data misuse. - The policies and laws governing privacy,	- The importance of adhering to policies and laws that protect privacy, intellectual property, and the rights of others. - The impact of prohibited content/activity on individuals,	- Familiarize yourself with the policies, laws, and codes of conduct that apply to your online activity. - Report prohibited content/activity to the appropriate authorities or	Quiz/Unit Test/ Project

		948 - IT Essentials II 952 - Introduction to Cybersecurity	licensing, and intellectual property	organizations, and communities.	platform administrators. - Respect the privacy and intellectual property of others by obtaining proper consent and licensing for use of content. - Make informed decisions about what you share online and protect your own personal data.	
405	Use web browsers to effectively search and access information on the Internet.	All Classes	- The purpose and function of web browsers. - The basic features and capabilities of common web browsers, such as Chrome, Firefox, and Safari.	- How web browsers interact with web servers to access and display web pages. - The role of search engines in finding and accessing information on the internet.	- Choose and effectively use a web browser to access the internet. - Use search engines, such as Google, Bing, or Yahoo, to search for information on the internet. - Evaluate and assess the credibility, relevance, and accuracy of information found on the internet. - Use advanced search features, such as site-specific search and filtering options, to improve search results.	Quiz/Unit Test/ Project
406	Use collaboration software.	All Classes	- The purpose and types of collaboration software, such as group chat, file sharing, and project management tools. - The basic features and capabilities of common collaboration software, such as Slack, Google Drive, and Asana.	- How collaboration software can facilitate communication and collaboration within teams and organizations. - The benefits and limitations of using collaboration software in different contexts.	- Choose and effectively use collaboration software for communication and collaboration within teams and organizations. - Use the features of collaboration software, such as file sharing, task management, and group chat, to improve team productivity and efficiency. - Manage and organize	Quiz/Unit Test/ Project

					collaboration data and files to ensure easy access and collaboration. - Collaborate with others to create and share documents, presentations, and other work products.	
407	Identify safe and appropriate manner and the implications of the digital footprint when using social media.	665 - Web Page Design 945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity	- The definition of digital footprint and how it is created. - The types of information that can be included in a digital footprint, such as posts, comments, images, and personal information.	- The implications of a digital footprint, both positive and negative, including privacy, reputation, and future opportunities. - The importance of being mindful of what is posted on social media and how it affects one's digital footprint.	- Assess and evaluate the privacy settings and security of social media accounts. - Use social media in a safe and appropriate manner, avoiding posting personal information, sensitive information, or content that could harm one's reputation or relationships. - Consider the long-term implications of posting on social media and think before sharing or posting content. - Regularly monitor and manage one's digital footprint by removing or correcting any negative content.	Quiz/Unit Test/ Project

500 Computer Hardware

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment

501	Categorize storage devices and backup media.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity	- The types of storage devices and backup media available, such as hard drives, solid-state drives, USB drives, and cloud storage. - The basic differences between storage devices and backup media, including capacity, speed, and accessibility.	- The appropriate use cases for different types of storage devices and backup media. - The importance of backing up data to protect against data loss or corruption.	- Choose and use appropriate storage devices and backup media for different types of data and situations. - Regularly backup important data to protect against data loss or corruption. - Store backup media in a safe and secure location to ensure the integrity of the data. - Evaluate the need for multiple backup solutions and implement a backup strategy that meets the needs of the data.	Quiz/Unit Test/ Project
502	Select motherboard components based on types, and features.	945 - IT Essentials I 948 - IT Essentials II	- The different types of motherboard components, such as CPU, RAM, storage, and expansion slots. - The basic features and specifications of each component, including clock speed, capacity, and compatibility.	- How different components interact with one another to form a computer system. - The importance of compatibility and compatibility between components when selecting and building a computer system.	- Research and compare different motherboard components to determine the best options for a specific build. - Consider the intended use case for the computer system and select components that meet the needs and requirements. - Ensure compatibility between components and choose components that are compatible with the selected motherboard. - Consider the budget and select components that provide the best balance of performance, features, and	Quiz/Unit Test/ Project

					value.	
503	Select power supplies based on system requirements.	945 - IT Essentials I 948 - IT Essentials II	- The basic specifications and features of power supplies, such as power output, efficiency, and compatibility. - The different types of power supplies and their intended use cases, such as ATX, SFX, and modular power supplies.	- The importance of selecting a power supply that is appropriate for the computer system and its components. - How the specifications and features of a power supply impact system performance and stability.	- Research and compare power supplies to determine the best options for a specific computer build. - Determine the system's power requirements by calculating the total power consumption of all components. - Select a power supply that is compatible with the selected motherboard and provides sufficient power output to support the system components. - Consider the budget and select a power supply that provides the best balance of performance, features, and value.	Quiz/Unit Test/ Project
504	Define the purpose and characteristics of central processor units (CPUs) and their features.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity	- The basic definition and function of a CPU, including its role as the primary processing unit in a computer. - The different types of CPUs and their intended use cases, such as desktop, laptop, and server CPUs.	- The various components that make up a CPU, including the control unit, arithmetic logic unit, and register files. - The importance of selecting an appropriate CPU based on the intended use of the computer system and its components.	- Research and compare different CPU models to understand their specifications and features. - Determine the system's processing requirements by considering the intended use of the computer and the types of applications it will run. - Select a CPU that is compatible with the selected motherboard and provides sufficient processing power to support the system	Quiz/Unit Test/ Project

					components and intended use. - Consider the budget and select a CPU that provides the best balance of performance, features, and value.	
505	Select and install cooling methods and devices.	945 - IT Essentials I 948 - IT Essentials II	- The various cooling methods used in computer systems, including air cooling, liquid cooling, and thermal paste. - The different types of cooling devices, such as fans, heat sinks, and radiators.	- The importance of selecting appropriate cooling methods and devices to prevent overheating and damage to system components. - The thermal requirements of different system components and how to determine the cooling needs of a computer system.	- Research and compare different cooling methods and devices to understand their specifications and features. - Determine the cooling requirements of the computer system based on the intended use, number of components, and thermal design specifications of each component. - Select appropriate cooling methods and devices that provide sufficient cooling performance to meet the needs of the system components. - Properly install the selected cooling methods and devices following the manufacturer's instructions and recommended best practices.	Quiz/Unit Test/ Project

506	Select and install memory based on type, characteristics, and their purpose.	945 - IT Essentials I 948 - IT Essentials II	- The different types of memory used in computer systems, including RAM (Random Access Memory), SRAM (Static RAM), and DRAM (Dynamic RAM). - The characteristics and purposes of each type of memory, such as data access time, storage capacity, and volatile/non-volatile storage.	- The importance of selecting appropriate memory to support the system's performance and functionality. - The memory requirements of different computer systems, including the number of memory modules and the capacity of each module.	- Research and compare different types of memory to understand their specifications and features. - Determine the memory requirements of the computer system based on the intended use, number of components, and the software programs to be installed. - Select appropriate memory modules that provide sufficient storage capacity and data access speed to meet the needs of the system. - Properly install the selected memory modules following the manufacturer's instructions and recommended best practices.	Quiz/Unit Test/ Project
507	Select and distinguish between different display devices and their characteristics.	945 - IT Essentials I 948 - IT Essentials II 947 - Honors Game Design and Simulation 665 - Web Page Design	- The different types of display devices, including CRT (Cathode Ray Tube), LCD (Liquid Crystal Display), OLED (Organic Light Emitting Diode), and LED (Light Emitting Diode) displays. - The characteristics and purposes of each type of display, such as resolution, refresh rate, color accuracy, and size.	- The importance of selecting appropriate display devices to support the system's performance and functionality. - The display requirements of different computer systems, including the type of display and its specifications, such as resolution and refresh rate.	- Research and compare different types of display devices to understand their specifications and features. - Determine the display requirements of the computer system based on the intended use, number of components, and the software programs to be installed. - Select appropriate display devices that provide sufficient resolution, color	Quiz/Unit Test/ Project

					accuracy, and size to meet the needs of the system. - Properly install and set up the selected display devices following the manufacturer's instructions and recommended best practices.	
508	Install and configure peripherals and input devices.	945 - IT Essentials I 948 - IT Essentials II	- The different types of peripherals and input devices, including keyboards, mice, printers, scanners, and others. - The basic functions and specifications of each type of peripheral and input device.	- The importance of selecting and installing appropriate peripherals and input devices to support the system's performance and functionality. - The requirements and compatibility of different computer systems for the peripheral and input devices.	- Research and compare different types of peripherals and input devices to understand their specifications and features. - Determine the peripheral and input device requirements of the computer system based on the intended use, number of components, and the software programs to be installed. - Select and purchase appropriate peripherals and input devices that meet the needs and requirements of the system. - Properly install and connect the selected peripherals and input devices to the computer system, following the manufacturer's instructions and recommended best practices.	Quiz/Unit Test/ Project
509	Summarize the function and types of adapter cards.	945 - IT Essentials I 948 - IT	- The purpose of adapter cards is to add new capabilities or to enhance	- Different types of adapter cards, such as sound cards, network cards, video cards,	- Select and install the appropriate adapter card based on your computer's	Quiz/Unit Test/ Project

		Essentials II	existing capabilities of a computer system.	etc., serve specific functions.	requirements and intended use, and properly configure it to work with the rest of the system.	
510	Configure and optimize portable devices, e.g., laptops, tablets, and smart devices.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity	- Portable devices such as laptops, tablets, and smartphones have various configuration options to improve their performance and functionality.	- How to optimize and adjust settings for device hardware, software, and network connections can improve device performance.	- Configure and optimize your portable device by adjusting settings, installing updates, and making changes as needed to ensure optimal performance and functionality.	Quiz/Unit Test/ Project
511	Install, configure, and maintain the components of a desktop computer.	945 - IT Essentials I 948 - IT Essentials II	- A desktop computer consists of multiple components that work together to provide computing capabilities.	- The components of a desktop computer need to be properly installed, configured, and maintained to ensure optimal performance and longevity.	- Install, configure, and maintain your desktop computer components by following manufacturer instructions, updating software and drivers, and regularly cleaning and checking components for wear and tear.	Quiz/Unit Test/ Project
512	Detect problems, troubleshoot, and repair and replace the components of a desktop and laptop computer components.	948 - IT Essentials II	- Computers may encounter problems that affect their performance, functionality, or stability.	- To repair and maintain computer components, it is necessary to identify the source of the problem and determine the most effective solution.	- Use troubleshooting techniques to isolate the issue, such as checking connections, resetting the computer, or using system diagnostic tools. If necessary, replace faulty components with properly compatible replacements, following manufacturer instructions and safety guidelines.	Quiz/Unit Test/ Project

513	Install, configure, and maintain printers.	948 - IT Essentials II	- The different types of printers (inkjet, laser, thermal, etc.) - The basic components of a printer (print head, ink cartridges, paper tray, etc.) - The requirements for setting up a printer (operating system, software, cables, etc.)	- The process of connecting a printer to a computer - The process of installing and configuring printer software - The steps for maintaining a printer (replacing ink cartridges, cleaning print heads, troubleshooting, etc.)	- Connect a printer to a computer - Install and configure printer software - Maintain a printer by replacing ink cartridges, cleaning print heads, and troubleshooting - Test the printer to verify that it is functioning correctly - Document the setup and maintenance process for future reference.	Quiz/Unit Test/ Project
514	Calculate voltage, wattage, and capacity of power supply.	945 - IT Essentials I 948 - IT Essentials II	- The basic components of a power supply (AC/DC adapter, transformer, rectifier, etc.) - The basic formulas for calculating voltage, wattage, and capacity - The units of measurement for voltage, wattage, and capacity (volts, watts, amp-hours, etc.)	- The relationship between voltage, wattage, and capacity - How to calculate voltage, wattage, and capacity using the appropriate formulas - How to read and interpret the specifications of a power supply	- Calculate voltage, wattage, and capacity using the appropriate formulas - Read and interpret the specifications of a power supply - Verify the calculations by comparing them to the specifications of the power supply - Document the calculations and their results for future reference.	Quiz/Unit Test/ Project
515	Categorize different case form factors, their fans, and air flow directions.	945 - IT Essentials I 948 - IT Essentials II	- The different case form factors (ATX, Micro-ATX, ITX, etc.) - The types of fans used in computer cases (axial, radial, blower, etc.) - The basic concepts of air flow in a computer case (positive pressure, negative pressure, etc.)	- The differences between the different case form factors and their compatibility with different components - The differences between the different types of fans and their functions - The importance of proper airflow in a computer case and how it affects	- Categorize different case form factors based on their size and compatibility with different components - Identify the type of fan used in a computer case based on its design and specifications - Determine the air flow direction in a computer case	Quiz/Unit Test/ Project

				performance and cooling	based on the arrangement of the fans and other components - Document the findings for future reference.	
516	Differentiate between and describe the characteristics of various types of printers.	945 - IT Essentials I 948 - IT Essentials II	- There are several types of printers, including inkjet, laser, thermal, and dot matrix printers. - Each type of printer uses a different technology to print images or text onto paper or other media. - Different types of printers have different strengths and weaknesses, depending on the intended use and printing requirements.	- Inkjet printers use ink cartridges to spray tiny droplets of ink onto paper, creating high-quality color prints with good detail. - Laser printers use toner cartridges and a laser beam to fuse toner onto paper, producing fast, high-quality prints that are more suited for text and black and white documents. - Thermal printers use heat to transfer ink from a ribbon onto paper, making them suitable for printing receipts, tickets, and labels. - Dot matrix printers use a series of pins to strike a ribbon and create a pattern of dots on paper, making them suited for printing multipart forms and other documents that require carbon copies.	- Research the various types of printers and their specific characteristics and use cases. - Practice maintaining and troubleshooting common issues with printers, such as paper jams, low ink or toner, and connectivity issues.	Quiz/Unit Test/ Project
517	Explain and categorize the capabilities and limitations of various portable devices.	945 - IT Essentials I 948 - IT Essentials II	- The different types of portable devices (smartphones, laptops, tablets, etc.) - The basic components of each type of portable device (processor, RAM, storage, battery, etc.)	- The differences between the various types of portable devices in terms of performance, capabilities, and limitations - How to evaluate the suitability of a portable device for a specific task or	- Explain the capabilities and limitations of each type of portable device - Categorize the various types of portable devices based on their characteristics (e.g. performance, battery life,	Quiz/Unit Test/ Project

			- The typical use cases for each type of portable device	requirement - The trade-offs between the different types of portable devices (e.g. performance vs. battery life, weight vs. screen size, etc.)	screen size, etc.) - Evaluate the suitability of a portable device for a specific task or requirement - Document the findings for future reference.	
518	Identify various computer port types and purpose.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 954 - Routing & Switching Essentials	- The different types of computer ports (USB, HDMI, Ethernet, etc.) - The physical appearance of each type of port - The basic functions of each type of port	- The differences between the various types of computer ports in terms of their capabilities and functions - The purpose of each type of port and the types of devices that are typically connected to it - How to identify a port based on its physical appearance and function	- Identify the different types of computer ports based on their physical appearance and function - Explain the purpose and capabilities of each type of port - Connect a device to the appropriate port based on its requirements - Document the findings for future reference.	Quiz/Unit Test/ Project

600 Troubleshooting, Repair and Maintenance

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
601	Apply troubleshooting methodologies.	All Classes	- The basic steps of the troubleshooting process (identifying the problem, gathering information, developing a hypothesis, testing the hypothesis, etc.) - Common troubleshooting methodologies (top-down, bottom-up, trial-and-error, etc.) - The importance of documenting the	- The different stages of the troubleshooting process and how they interact with each other - The strengths and weaknesses of different troubleshooting methodologies and when to use each - The importance of clear and thorough documentation in the troubleshooting process	- Apply the troubleshooting process to identify and resolve problems in various scenarios - Choose the appropriate troubleshooting methodology for a given scenario based on its requirements - Document the troubleshooting process and its results for future	Project

			troubleshooting process and its results		reference - Evaluate the results of the troubleshooting process and make changes or modifications as necessary.	
602	Troubleshoot and resolve common hardware and operating system symptoms and their causes.	9XX - Honors Introduction to Programming II 945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity	- Common hardware and operating system symptoms include error messages, slow performance, crashes, and hardware malfunctions.	- These symptoms can be caused by a variety of factors, such as outdated software or hardware, conflicts between programs, or malware infections.	- Troubleshoot and resolve common hardware and operating system symptoms by identifying the source of the problem, running diagnostic tools, checking for updates or patches, uninstalling conflicting software, or running virus scans.	Project
603	Use troubleshooting methods and tools for printers.	948 - IT Essentials II	- Common printer symptoms (e.g. paper jam, error messages, slow performance, etc.) - Basic troubleshooting methodologies (e.g. top-down, trial-and-error, etc.) - Basic printer troubleshooting tools (e.g. software diagnostics, control panels, etc.)	- How to diagnose the root cause of a printer symptom by considering different possible causes and ruling them out - The importance of proper documentation and tracking in the troubleshooting process - The strengths and weaknesses of different troubleshooting methods and tools for printers	- Troubleshoot and resolve common printer symptoms by following a systematic process - Evaluate and rule out different possible causes of a symptom - Use relevant troubleshooting methods and tools to diagnose and resolve the root cause of the symptom - Document the troubleshooting process and its results for future reference - Follow best practices and guidelines to prevent future problems.	Project

604	Troubleshoot mobile device issues.	948 - IT Essentials II	- Common mobile device symptoms (e.g. slow performance, battery life issues, software crashes, etc.) - Basic troubleshooting methodologies (e.g. top-down, trial-and-error, etc.) - Basic mobile device troubleshooting tools (e.g. software diagnostics, control panels, etc.)	- How to diagnose the root cause of a mobile device symptom by considering different possible causes and ruling them out - The importance of proper documentation and tracking in the troubleshooting process - The strengths and weaknesses of different troubleshooting methods and tools for mobile devices	- Troubleshoot and resolve common mobile device symptoms by following a systematic process - Evaluate and rule out different possible causes of a symptom - Use relevant troubleshooting methods and tools to diagnose and resolve the root cause of the symptom - Document the troubleshooting process and its results for future reference - Follow best practices and guidelines to prevent future problems.	Project
605	Integrate common preventative maintenance techniques for computers.	944 - Honors Introduction to Programming I 9XX - Honors Introduction to Programming II 945 - IT Essentials I 947 - Honors Game Design and Simulation 948 - IT Essentials II 952 - Introduction to Cybersecurity	- Common computer maintenance tasks (e.g. updating software, defragmenting hard drive, cleaning components, etc.) - Importance of preventative maintenance in maintaining computer health and performance - Best practices and guidelines for computer maintenance	- The impact of various maintenance tasks on computer health and performance - The interrelationship between different maintenance tasks and how they impact each other - The importance of following a regular maintenance schedule	- Integrate common preventative maintenance techniques into a regular maintenance schedule - Perform common computer maintenance tasks such as updating software, defragmenting hard drive, cleaning components, etc. - Follow best practices and guidelines to maintain computer health and performance - Document the maintenance process and its results for future reference	Quiz/Unit Test/ Project

					- Evaluate the results of the maintenance process and make changes or modifications as necessary.	
606	Identify basic computer and networking tools.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- Different categories of computer and networking tools (e.g. diagnostic, configuration, security, etc.) - Common examples of computer and networking tools (e.g. command prompt, IP scanner, antivirus software, etc.) - The purpose and function of different computer and networking tools	- The strengths and weaknesses of different computer and networking tools - The importance of choosing the right tool for a particular task - The impact of using the wrong tool for a task	- Identify basic computer and networking tools and categorize them based on their function - Evaluate different computer and networking tools to determine their strengths and weaknesses - Document the process and results of using computer and networking tools for future reference.	Quiz/Unit Test/ Project
607	Choose and utilize the appropriate hand tool for a given task.	948 - IT Essentials II 949 - Introduction to Networks	- Different categories of computer and networking tools (e.g. diagnostic, configuration, security, etc.) - Common examples of computer and networking tools (e.g. command prompt, IP scanner, antivirus software, etc.) - The purpose and function of different computer and networking tools	- The strengths and weaknesses of different computer and networking tools - The importance of choosing the right tool for a particular task - The impact of using the wrong tool for a task	- Choose the appropriate tool for a particular task based on its function and suitability - Use the chosen tool effectively and efficiently to complete the task	Project

700 Operating Systems and Software

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment

701	Evaluate different operating systems by their features.	944 - Honors Introduction to Programming I 9XX - Honors Introduction to Programming II 945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity	- Types of operating systems, such as Windows, MacOS, and Linux - The features and capabilities of different operating systems - The strengths and weaknesses of each operating system	- The importance of choosing the right operating system based on the intended use - The compatibility of different operating systems with various hardware and software - The security and stability of different operating systems	- Research and compare different operating systems to determine which one best meets their needs - Install and configure the chosen operating system - Evaluate the performance, features, and stability of the operating system to ensure it meets their needs - Continuously monitor and update the operating system to maintain optimal performance and security.	Quiz/Unit Test/ Project
702	Use various user interfaces.	944 - Honors Introduction to Programming I 945 - IT Essentials I 947 - Honors Game Design and Simulation 948 - IT Essentials II 665 - Web Page Design	- Different types of operating systems and their user interfaces (e.g. Windows, MacOS, Linux) - Basic functions and features of operating system user interfaces - Basic navigation and control of the user interface	- The purpose of operating system user interfaces - How to access and use different parts of the user interface (e.g. start menu, desktop, file explorer) - How to customize the user interface to meet personal needs	- Install and set up an operating system with a chosen user interface - Navigate the user interface and access different parts and functions - Customize the user interface to meet personal needs - Troubleshoot basic user interface issues and problems.	Quiz/Unit Test/ Project
703	Install and configure an operating system.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing	- The different types of operating systems (Windows, macOS, Linux, etc.) and their respective features - The requirements for installing the specific operating system chosen - The steps for installing the operating system and drivers	- The role of the operating system in controlling and managing the computer's hardware and software - The differences between a clean install and an upgrade - The importance of updating and patching the operating system regularly	- Gather the necessary information and tools before installing the operating system (product key, installation media, etc.) - Backup all important data before starting the installation process - Follow the steps to install the operating system, partition the hard drive, and	Quiz/Unit Test/ Project

		& Switching Essentials 665 - Web Page Design			format it - Test the operating system and make any necessary adjustments to ensure it is functioning properly.	
704	Select and use system utilities and tools and evaluate the results.	665 - Web Page Design 944 - Honors Introduction to Programming I 9XX - Honors Introduction to Programming II 947 - Honors Game Design and Simulation 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- Different types of system utilities and tools - Benefits and drawbacks of each tool - Purpose of each tool and its usage	- How each tool can be used to diagnose and resolve system issues - What information each tool provides and how it can be used to improve system performance	- Choose the appropriate system utilities and tools for a given situation - Evaluate the results of system tool usage to identify the root cause of a problem - Continuously learn about new system utilities and tools and incorporate them into daily workflow as necessary.	Quiz/Unit Test/ Project
705	Select the appropriate commands and options to troubleshoot and resolve problems.	944 - Honors Introduction to Programming I 9XX - Honors Introduction to Programming II 947 - Honors Game Design	- Available commands and options to troubleshoot and resolve problems - Common operating system and software issues	- The causes of common operating system and software issues - How to effectively use the available commands and options to troubleshoot and resolve problems	- Diagnose common operating system and software issues - Execute the appropriate commands and options to troubleshoot and resolve problems - Evaluate the effectiveness of the solution and make	Project

		and Simulation 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials			necessary adjustments	
706	Differentiate between various operating system directory structures.	945 - IT Essentials I 948 - IT Essentials II	- Types of operating systems (Windows, Mac OS, Linux) - The purpose of a directory structure in an operating system - Basic file and folder organization in a directory structure	- The difference between the directory structures of different operating systems - How the directory structure affects the organization and access to files and folders - The importance of a well-organized directory structure in terms of efficiency and ease of use	- Analyze the directory structure of a given operating system and explain its organization - Compare and contrast the directory structures of different operating systems - Evaluate the organization of a directory structure and make suggestions for improvement - Implement best practices for organizing and maintaining a well-structured directory structure.	Quiz/Unit Test/ Project
	RESERVED (707)	-				
708	Troubleshoot common operating system (OS) and software issues.	948 - IT Essentials II 952 - Introduction to Cybersecurity	- Basic knowledge of operating systems, including Windows, macOS, and Linux - Understanding of common operating system errors and software issues - Knowledge of the common	- How to diagnose the root cause of operating system and software issues - The importance of following best practices when troubleshooting operating systems and software - How to use the	- Perform basic troubleshooting techniques, such as updating software and restarting the computer - Use the command-line interface to resolve issues and run diagnostic tools - Follow best practices,	Project

			software and operating system tools used to troubleshoot issues.	command-line interface and other tools to resolve issues.	such as creating backups and researching solutions before implementing them. - Document the steps taken to resolve the issue and keep track of the solution for future reference.	
709	Use command-line interface.	944 - Honors Introduction to Programming I 945 - IT Essentials I 947 - Honors Game Design and Simulation 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials 665 - Web Page Design	- The basic syntax and commands of the command-line interface (CLI) - The purpose and functionality of the CLI - How to access the CLI on a computer	- The advantages of using the CLI over a graphical user interface (GUI) - The different modes of operation in the CLI, such as user mode and administrator mode - How to navigate the file system using the CLI - The common commands used for managing files and directories, such as 'cd', 'ls', and 'rm'	- Use the CLI to navigate and manipulate files and directories - Run commands to install, configure, and troubleshoot software issues - Use the CLI to access and configure network settings - Utilize the CLI to automate tasks using scripts and macros.	Quiz/Unit Test/ Project
710	Install, configure, and maintain application suite and system software.	944 - Honors Introduction to Programming I 9XX - Honors Introduction to Programming II 945 - IT Essentials I	- Understanding of different application suites and system software available in the market. - Knowledge of different operating systems and their system requirements. - Familiarity with software installation and	- Importance of regular software updates and maintenance. - Understanding of different compatibility issues and how to resolve them. - Awareness of the security risks associated with software and the importance of	- Select the appropriate application suite and system software for a specific situation based on the user's requirements. - Install the selected software according to the manufacturer's instructions. - Configure the software to	Project

		947 - Honors Game Design and Simulation 948 - IT Essentials II 949 - Introduction to Networks 665 - Web Page Design	configuration processes.	software firewalls.	meet the user's requirements. - Regularly check for software updates and install them as necessary. - Troubleshoot and resolve any software compatibility or security issues that arise. - Ensure that software firewalls are enabled and configured correctly.	
711	Implement virtualization technologies.	948 - IT Essentials II 954 - Routing & Switching Essentials	- Definition of client-side virtualization - Types of virtualization software and their differences - Purpose and benefits of client-side virtualization	- The relationship between hardware and software in client-side virtualization - The process of creating and managing virtual machines - The advantages and limitations of client-side virtualization	- Research and choose an appropriate virtualization software - Install the virtualization software and create virtual machines - Configure and test the virtual machines for performance and compatibility - Implement and manage virtual machines to optimize their performance and stability - Troubleshoot and resolve common issues in client-side virtualization, such as performance degradation and compatibility issues.	Project

712	Describe the interaction between software and hardware.	665 - Web Page Design 944 - Honors Introduction to Programming I 945 - IT Essentials I 947 - Honors Game Design and Simulation 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity	- Software and hardware are two essential components of a computer system. - Software is a set of programs and applications that run on a computer, while hardware refers to physical components such as the motherboard, processor, memory, and storage devices.	- The interaction between software and hardware is crucial for a computer to function properly. - The software communicates with the hardware to access and use the resources it needs to perform its tasks. - The hardware components are responsible for executing the instructions given by the software.	- Familiarize yourself with different types of software and hardware components. - Understand how to install, configure, and update software and hardware components. - Develop the ability to diagnose and troubleshoot issues that arise when software and hardware interact. - Practice using various software and hardware tools to monitor the performance of your computer system. - Continuously educate yourself on the latest technologies and advancements in software and hardware to stay up-to-date.	Quiz/Unit Test/ Project
713	Categorize technologies that support cloud computing.	954 - Routing & Switching Essentials	-What cloud computing is.	-How cloud computing works.	-Explain when and how to use cloud computing.	Quiz/Unit Test/ Project

800 Networking

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment

801	Recommend computer network type based on their scope of coverage.	944 - Honors Introduction to Programming I 9XX - Honors Introduction to Programming II 945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- Different types of computer networks: LAN, WAN, PAN, CAN, and MAN - Characteristics and benefits of each network type - Factors to consider when selecting a network type - The scope of coverage for each network type	- How to analyze the client's requirements and determine the appropriate network type - The impact of network type on data transfer speed, security, and cost	- Ask the client questions about their needs, budget, and goals for the network - Evaluate the client's requirements and determine the most appropriate network type - Provide a recommendation based on the client's needs, budget, and goals - Explain the benefits and limitations of the recommended network type to the client - Provide a detailed plan and timeline for implementing the recommended network type - Continuously monitor the network and make adjustments as needed to ensure optimal performance.	Quiz/Unit Test/ Project
802	Recommend internet technologies based on clients' requirements.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials 665 - Web Page Design	- The different internet technologies available, including broadband, fiber optic, satellite, and dial-up - The characteristics and limitations of each technology - The common uses for each technology	- How to assess the needs and requirements of clients, including the type of work they do, their location, and their budget - How to evaluate the suitability of each technology for the specific needs of each client	- Research and gather information on the different internet technologies available - Evaluate the needs and requirements of each client and make recommendations based on their specific situation - Explain the benefits and limitations of each technology to the client and provide a clear comparison between the different options - Provide support and assistance to the client	Quiz/Unit Test/ Project

					throughout the process of selecting and setting up the appropriate internet technology.	
803	Identify networking fundamentals, technologies, devices, and protocols.	9XX - Honors Introduction to Programming II 945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials 665 - Web Page Design	- Networking fundamentals such as LAN, WAN, and internet - Basic networking devices such as switches, routers, and firewalls - Network protocols such as TCP/IP, HTTP, FTP, DNS, and DHCP - Types of wired and wireless networks	- The purpose of each networking device - How each network protocol functions - The differences between different types of networks - The importance of network security	- Install and configure basic networking devices - Identify the appropriate network protocol for a specific situation - Implement basic network security measures - Troubleshoot network connectivity issues - Install and test network cables and connectors	Quiz/Unit Test/ Project
804	Fabricate and install test network cables, connectors, and basic network infrastructure.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 954 - Routing & Switching Essentials	- Types of network cables and connectors, including Cat5, Cat6, and fiber optic. - Types of network infrastructure, including switches, routers, and firewalls. - Basic fabrication techniques for network cables, such as crimping and punching down connectors.	- The differences and uses of each type of network cable and connector. - The purpose and function of each component of a network infrastructure. - How to properly terminate network cables and connectors.	- Choose the appropriate network cable and connector for a specific network installation. - Assemble a basic network infrastructure with switches, routers, and firewalls. - Fabricate and install network cables and connectors, ensuring proper termination and testing.	Quiz/Unit Test/ Project

805	Compare and contrast various types of wired and wireless networks.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- Types of wired networks: Ethernet, Token Ring, and FDDI - Types of wireless networks: Wi-Fi, Cellular, and Bluetooth	- The differences between wired and wireless networks in terms of speed, cost, and range - The advantages and disadvantages of each type of wired and wireless network	- Evaluate the needs of a specific situation to determine the best type of network to use - Compare and contrast different types of networks to determine the best fit for a specific scenario - Install and configure the appropriate type of network for a specific scenario, considering factors such as speed, cost, and range.	Quiz/Unit Test/ Project
806	Use computer tools to troubleshoot problems of network connectivity.	948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- Types of network tools such as ping, traceroute, and nslookup - Types of network connectivity issues such as IP address conflict, DNS resolution issues, and routing problems - Basic concepts of TCP/IP, DNS, and routing	- How to use network tools to diagnose network connectivity problems - How to interpret the results of network tools to determine the root cause of the problem - How to troubleshoot common network connectivity issues	- Use network tools to diagnose network connectivity problems - Interpreting the results of network tools to determine the root cause of the problem - Troubleshoot common network connectivity issues such as IP address conflict, DNS resolution issues, and routing problems - Configure network settings to resolve connectivity issues - Document the steps taken to resolve the problem for future reference and for sharing with others who may encounter similar issues.	Quiz/Unit Test/ Project

807	Install and configure a small office/home office (SOHO) network.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- Understanding of small office/home office network requirements and components, including routers, switches, firewalls, and access points. - Knowledge of IP addressing, subnetting, and DHCP configuration. - Familiarity with different types of SOHO networks, such as wired, wireless, and hybrid.	- The importance of security measures in SOHO networks, such as firewalls, password protection, and encryption. - The impact of network architecture on the speed and reliability of the network. - The significance of network monitoring and maintenance for ongoing performance and stability.	- Install and configure a router, switch, firewall, and access points for a SOHO network. - Allocate IP addresses and configure DHCP. - Set up security measures such as firewalls, password protection, and encryption. - Test the network and ensure it is operating as expected. - Perform regular monitoring and maintenance to ensure network stability and performance.	Quiz/Unit Test/ Project
808	Install and configure network resources.	945 - IT Essentials I 948 - IT Essentials II 949 - Introduction to Networks 954 - Routing & Switching Essentials	- Different types of network resources (printers, servers, switches, routers, etc.) - Network topologies (star, bus, ring, mesh) - Basic network protocols (TCP/IP, DNS, DHCP) - Network cabling (UTP, STP, Fiber) - Network security measures (firewall, encryption, access control)	- The purpose and function of each network resource - How each network resource is connected and communicates with other resources - How to plan and design a network based on the organization's needs and requirements - The importance of network security and how to implement it	- Install network resources such as printers, servers, switches, routers, etc. - Configure network resources such as IP addresses, subnets, gateways, etc. - Connect and test network devices to ensure proper communication - Implement security measures such as firewalls, access control, and encryption - Troubleshoot common network issues such as connectivity problems, IP conflicts, and security breaches.	Quiz/Unit Test/ Project

900 Security

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
901	Follow the ethical, legal and security requirements related to handling data.	All Classes	- The importance of data protection and privacy - Ethical and legal requirements for handling data - Common security practices for protecting data	- The consequences of unethical or illegal handling of data - How to identify and protect sensitive information - The purpose and importance of data protection laws	- Implement data protection and security measures - Follow ethical and legal guidelines for handling data - Understand the confidentiality and privacy agreements when handling sensitive information - Ensure secure storage and transfer of data - Regularly update and maintain data protection measures.	Quiz/Unit Test/ Project
902	Implement and identify security features including wireless encryption and malicious software protection.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- The basics of wireless encryption and how it works to secure data transmission over a wireless network. - Different types of malicious software (malware), their effects on a computer, and how to detect them.	- The importance of implementing security features to protect against potential threats to the network and its users. - The benefits and limitations of different types of wireless encryption and how to choose the most appropriate method for a given situation. - How to identify and prevent common methods used by malware to infect a computer, such as email attachments, infected websites, and software vulnerabilities.	- Implement wireless encryption on a wireless network, using methods such as WEP, WPA, and WPA2. - Use anti-malware software and update it regularly to protect against new threats. - Monitor the network and its users for signs of malware activity and take appropriate action to remove it if necessary. - Educate users on best practices for avoiding malware infections, such as not opening attachments from unknown sources and keeping software up-to-date.	Quiz/Unit Test/ Project

903	Implement and identify security, password management, locking workstations, and biometrics.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- The importance of securing computer systems and data to prevent unauthorized access - The various security measures that can be used, including passwords, locking workstations, biometrics, and firewalls - The differences between strong and weak passwords, and how to create a secure password	- How to implement security measures to protect computer systems and data - The different types of biometric authentication, such as fingerprint recognition and facial recognition - The impact of weak passwords and unprotected systems on security and privacy	- Implement strong passwords and change them regularly - Lock the computer screen when leaving the workstation - Use biometric authentication where available to add an extra layer of security	Quiz/Unit Test/ Project
904	Troubleshoot, remove, and prevent viruses and malware.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity	- What viruses and malware are and how they can harm computer systems and networks - The different types of viruses and malware, including viruses, Trojans, spyware, and adware - The signs that a computer may be infected with a virus or malware	- How viruses and malware can spread and infect computer systems - The importance of regularly updating security software and systems to prevent infection - The impact of viruses and malware on computer systems and networks, including decreased performance and lost data	- Regularly update all security software and systems to stay protected from new threats - Avoid opening suspicious emails or downloading unknown files - Keep backup copies of important data in a secure location - Use antivirus and anti-malware software and keep it up to date - Scan the computer regularly for viruses and malware	Quiz/Unit Test/ Project
905	Implement security and troubleshoot common issues.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity 954 - Routing	- What viruses and malware are and how they can harm computer systems and networks - The different types of viruses and malware, including viruses, Trojans, spyware, and adware	- How viruses and malware can spread and infect computer systems - The importance of regularly updating security software and systems to prevent infection - The impact of viruses and	- Regularly update all security software and systems to stay protected from new threats - Avoid opening suspicious emails or downloading unknown files - Keep backup copies of	Quiz/Unit Test/ Project

		& Switching Essentials	- The signs that a computer may be infected with a virus or malware	malware on computer systems and networks, including decreased performance and lost data	important data in a secure location - Use antivirus and anti-malware software and keep it up to date - Scan the computer regularly for viruses and malware	
906	Address the ethical, security, and privacy issues involved in posting information about yourself and others on social networking sites, e.g., blogs.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity 665 - Web Page Design	- The basics of online privacy, security, and ethics as it relates to social media and blogging - The different types of personal information that can be shared online, including name, address, phone number, and photos	- The consequences of posting personal information on social media and blogs, including identity theft, harassment, and cyberbullying - The importance of protecting personal information online and respecting the privacy of others - The ethical considerations involved in sharing personal information, including truthfulness, accuracy, and respect for others	- Evaluate the privacy settings on all social media and blogging accounts to ensure personal information is protected - Avoid sharing personal information that can be used to identify or locate an individual, such as home address or phone number - Think before posting, considering the potential impact of what is being shared - Report any instances of cyberbullying or harassment to the appropriate authorities	Quiz/Unit Test/ Project
907	Implement industry standard practices dealing with user account management.	945 - IT Essentials I 948 - IT Essentials II 952 - Introduction to Cybersecurity 954 - Routing & Switching Essentials	- The importance of user account management in ensuring the security of a computer system - The basic concepts of user account management, including password policies, user roles and permissions, and user authentication	- The role of user account management in preventing unauthorized access to a computer system - The different types of user accounts, including administrative, standard, and guest accounts - The significance of password policies in ensuring the security of user accounts - The importance of defining	- Implement strong password policies, including requirements for password length, complexity, and regular updates - Create user accounts for all users, assigning appropriate roles and permissions based on their job requirements - Enable two-factor authentication for all user	Quiz/Unit Test/ Project

				user roles and permissions to limit access to sensitive data and systems	accounts to increase security - Regularly monitor and audit user accounts to detect any unauthorized changes or activity - Provide training to users on the importance of password security and safe computer usage practices	
908	Perform basic forensic concepts, e.g., incident response, chain of custody, evidence preservation, and documentation.	948 - IT Essentials II 952 - Introduction to Cybersecurity	- The importance of forensic concepts in Cybersecurity - The basic steps involved in incident response, chain of custody, evidence preservation, and documentation - The types of evidence that can be used in Cybersecurity investigations	- The importance of incident response in mitigating the damage caused by a cyberattack - The significance of chain of custody in ensuring the integrity of evidence - The proper methods of preserving digital evidence to prevent contamination or alteration - The role of documentation in recording the details of an investigation and building a case	- Follow established incident response procedures to quickly contain and mitigate the damage caused by a cyberattack - Secure and preserve the evidence, maintaining a clear chain of custody - Document all steps taken during the investigation, including the collection, preservation, and analysis of evidence - Ensure that all evidence is collected in a manner that will withstand legal scrutiny - Follow established evidence preservation procedures to prevent contamination or alteration of evidence - Document the details of the investigation, including all relevant information such as date, time, and the actions taken - Ensure that all	Quiz/Unit Test/ Project

					documentation is complete, accurate, and professional.	
909	Explain disaster recovery best practices and implementation.	oduction to Cybe				

1000 Communication and Professionalism

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1001	Use effective soft skills such as proper etiquette, active listening, and cultural sensitivity.	All Classes	- The importance of effective communication in customer service - The basic principles of effective communication - The role of active listening and empathy in communication with customers	- The impact of communication on customer satisfaction and loyalty - The importance of clear, concise, and professional communication - The impact of tone, body language, and nonverbal communication on customer interactions	- Listen actively to customers and their needs - Show empathy and understanding towards the customer's situation - Use clear, concise, and professional language in communication with customers - Pay attention to tone, body language, and nonverbal communication in customer interactions - Avoid using jargon or technical language that the customer may not understand - Respond promptly and professionally to customer inquiries and requests - Continuously improve communication skills through practice and feedback.	Quiz/Unit Test/ Project

1002	Solve customer and client problems.	All Classes	- The importance of solving customer and client problems - The basic steps in the problem-solving process - The role of active listening and empathy in solving customer and client problems	- The impact of unresolved customer and client problems on business relationships - The importance of clear communication and active listening in problem-solving - The benefits of a systematic and proactive approach to problem-solving	- Listen actively to customer and client concerns and complaints - Show empathy and understanding towards the customer's or client's situation - Ask questions to clarify the nature of the problem - Identify and prioritize potential solutions to the problem - Evaluate the consequences and potential impact of different solutions - Implement the most appropriate solution and follow up with the customer or client - Document the problem and its resolution for future reference and to continuously improve the problem-solving process.	Quiz/Unit Test/ Project
1003	Utilize the team approach to deliver client service.	All Classes	- The importance of teamwork in client service - The role of different team members in delivering client service - The benefits of a team approach to client service	- The interdependence of team members in delivering client service - The impact of individual behavior on the team's ability to deliver client service - The importance of clear communication and collaboration in a team environment	- Participate actively and constructively in team meetings and discussions - Foster a positive and collaborative team dynamic - Communicate effectively and regularly with team members - Take ownership of individual tasks and responsibilities within the team - Provide constructive	Quiz/Unit Test/ Project

					feedback to team members - Support and help other team members as needed	
	RESERVED (1004)	-				
1005	Describe an appropriate professional social media and remote workplace presence.		- The purpose and benefits of professional social media presence - The importance of maintaining a professional online reputation - The consequences of unprofessional online behavior	- The relationship between professional social media presence and professional image and reputation - The impact of online behavior on personal and professional life - The need for a balanced and professional approach to social media presence	- Research and understand the guidelines and best practices for professional social media presence - Develop and maintain a professional online profile and presence on social media platforms - Avoid posting unprofessional or controversial content online - Interact with others in a respectful and professional manner online	Quiz/Unit Test/ Project
1006	Understand and create industry standard documentation, policies, procedures, and best practices.	All Classes	- The importance of standard documentation, policies, procedures, and best practices in the IT industry - Common formats and templates used for creating industry standard documentation, policies, procedures, and best practices - Key elements of standard documentation, policies, procedures, and best practices (e.g. purpose, scope, responsibilities, procedures, etc.)	- The relationship between standard documentation, policies, procedures, and best practices and the overall functioning and success of an IT organization - The impact of using inconsistent or outdated documentation, policies, procedures, and best practices - The need for regular review and updates to ensure documentation, policies, procedures, and best practices remain relevant and effective	- Create industry standard documentation, policies, procedures, and best practices using templates and established formats - Document the purpose, scope, responsibilities, and procedures for each element of standard documentation, policies, procedures, and best practices - Ensure documentation, policies, procedures, and best practices are consistent, accurate, and up-to-date - Regularly review and update documentation, policies, procedures, and	Quiz/Unit Test/ Project

					best practices as necessary to ensure they remain relevant and effective - Communicate and educate stakeholders on the importance and contents of standard documentation, policies, procedures, and best practices.	
1007	Identify appropriate computer equipment and peripheral for a specific situation and budget.	945 - IT Essentials I 947 - Honors Game Design and Simulation 948 - IT Essentials II 954 - Routing & Switching Essentials	- Different categories of computer equipment and peripherals (e.g. desktop computers, laptops, printers, monitors, etc.) - The various specifications and features of different computer equipment and peripherals (e.g. processing power, memory, storage, etc.) - The relationship between cost and performance of computer equipment and peripherals	- How to evaluate the specific needs and requirements of a situation to determine the appropriate computer equipment and peripheral - The impact of budget constraints on the selection of computer equipment and peripheral - The importance of balancing cost and performance in selecting computer equipment and peripherals	- Identify the specific needs and requirements of a situation to determine the appropriate computer equipment and peripheral - Evaluate the available options of computer equipment and peripherals based on their specifications, features, cost, and performance - Choose the appropriate computer equipment and peripheral that best fits the specific situation and budget - Document the process and results of selecting computer equipment and peripherals for future reference - Evaluate the chosen computer equipment and peripheral to ensure it meets the specific needs and requirements of the situation.	Quiz/Unit Test/ Project
1008	Implement and adhere to acceptable use policies.	All Classes	-What AUPs are.	-Why AUPs are necessary.	-Follow, create, and evaluate AUPs.	Quiz/Unit Test/ Project
1009	Maintain asset inventory.	ıtroduction to Ne	-What an inventory is and	-Various methods of tracking	-Practice maintaining an	Quiz/Unit Test/

		ing & Switching	why it is necessary.	assets.	asset inventory.	Project
1010	Evaluate the impact of new and emerging technologies.	**All Classes**	-Evaluate current and new technologies.	-Understand the impact of new technologies.	-Research and stay up to date with curent industry trends through current events.	Project

Pacing Guide

Dover Area School District
Curriculum Cover Sheet & Pacing

Course Number: 610

Course: Financial and Career Exploration

Planned Hours: 120

610 - Financial and Career Explorations (120 hours)

This course consists of two main components: Financial Literacy and Career Explorations. The Financial Literacy component is designed for students to build a strong foundation of personal financial skills to assist in preparation for adulthood. Emphasis will be placed on the following: managing personal spending to meet financial goals, understanding and controlling the use of credit and debt, developing an awareness of the impact of education on earning potential, exploring how money can work for us through saving and investing, using financial services, and the protection of assets through risk management. Students will use real-world examples and take part in activities including goal writing, personal budgets, investing simulations, and checking and savings account applications. The career portion of the class emphasizes the Pennsylvania Academic Standards for Career Education and Work. The class will provide students with the opportunity to begin or continue their examination into the future beyond high school. Students will have the opportunity to identify their personal aptitudes, abilities, and interests and connect those to possible career placements. Satisfactory completion of Smart Futures activities 1, 2, 3, 6, 7, 12, 14, and 15 is required to earn the credit for the course.

Pacing Guide:

610 - Financial and Career Explorations	**Associated Tasks** Accounting Bus Admin Marketing	**120 Hours**
Unit 1: Financial Goals & Money Management Tools	101, 108, 206, 905 204-206 801	12
Unit 2: Income	206, 404-407, 601, 905 1305-1306	23
Unit 3: Spending & Credit	206, 303, 308, 314, 601, 905 204-206, 301, 308, 401,909 1205	19
Unit 4: Saving & Investing	206, 905	18
Unit 5: Risk & Insurance	803	11
Unit 7: Career Acquisition & Preparation	802, 805 301-305,307, 1602-1605	18
Unit 8: Career Retention & Advancement	905, 1307,1404 1103-1104	19

Dover Area School District

Curriculum Cover Sheet & Pacing

KUD

Dover Area School District Curriculum K-U-D
Financial Literacy and Career Exploration

Standards	Know	Understand	Do
Financial Goals & Money Management Tools			
17.1.9-12.A Determine the financial impact of various long-term goals (e.g., lifestyle, family, education).	Different types of long-term financial goals	How various long-term goals impact financial planning and stability	Analyze and determine the financial impact of personal long-term goals (e.g., lifestyle, family, education)
17.1.9-12.B Apply a systematic decisionmaking process, including opportunity costs, to setting and achieving financial goals.	Steps in a systematic decision-making process Key terms: opportunity cost, systematic decision-making Various financial goals and examples Factors influencing financial decisions Tools and methods for financial planning	The concept of opportunity cost and its role in financial decision-making How to identify and evaluate opportunity costs when making financial decisions The importance of considering opportunity costs in setting financial goals The impact of decision-making processes on achieving long-term financial stability The benefits of a structured approach to decision-making in financial planning	Apply a systematic decision-making process to set and achieve financial goals Evaluate different financial goals and their opportunity costs Develop a step-by-step plan to achieve a specific financial goal Use decision-making frameworks to compare different financial options and their outcomes Create and analyze a financial plan incorporating opportunity costs and decision-making steps
17.1.9-12.C Analyze the impact of various factors on a person's financial	Different factors that influence financial mindset (e.g., culture, family,	How these factors interact to shape financial attitudes and behaviors	Analyze how personal experiences and external influences affect individual

mindset and decisions.	education, media, personal values)		financial decisions
17.1.9-12.D Evaluate strategies for dealing with behavioral biases and other obstacles to managing personal finances.	ommon behavioral biases affecting financial decisions (e.g., confirmation bias, overconfidence, loss aversion)	How behavioral biases impact financial decisions and long-term financial health	Identify personal behavioral biases and their impact on financial decisions
17.1.9-12.E Assess the value of sharing financial goals and information with others.	Types of financial goals (short-term, mid-term, long-term)	How sharing financial goals can provide accountability and support	Identify personal financial goals and consider the benefits of sharing them with others
17.1.9-12.F Compare various financial service providers (e.g., banks, credit unions, check cashers, brokerage firms) and the types of accounts and services each provides.	Types of financial service providers (e.g., banks, credit unions, check cashers, brokerage firms)	The differences in services, fees, and benefits provided by different financial institutions	Identify and list local financial service providers and the services they offer
17.1.9-12.G Communicate the process of opening financial accounts and the factors to consider when selecting financial institutions and professionals.	Steps involved in opening different types of financial accounts (e.g., checking, savings, investment accounts)	The importance of comparing different financial institutions before making a decision	Outline the steps to open a financial account
17.1.9-12.H Evaluate the use of financial technology to access financial services and make financial decisions.	Types of financial technology tools (e.g., online banking, mobile apps, robo-advisors, budgeting software)	The advantages and potential risks of using financial technology	Identify and list various financial technology tools and their functions
17.1.9-12.I Develop a system for documenting and organizing personal financial records, both paper and electronic.	Types of personal financial records (e.g., bank statements, tax documents, receipts, bills)	The importance of keeping organized financial records for effective financial management and future reference	Identify different types of personal financial records that need to be documented and organized
17.1.9-12.J Explain the financial implications of wills, powers of attorney, and naming beneficiaries for various accounts.	Definitions and purposes of wills, powers of attorney, and beneficiaries	How wills, powers of attorney, and beneficiary designations impact the distribution of assets	Identify and define wills, powers of attorney, and beneficiaries, and their roles in financial planning
17.1.9-12.K Explain the role of various state and federal financial regulators and consumer protection agencies.	Names and functions of key state and federal financial regulators and consumer protection agencies (e.g., SEC, FDIC, CFPB)	How state and federal regulators oversee financial institutions and enforce consumer protection laws	Identify and list key financial regulators and consumer protection agencies, along with their roles and functions
17.1.9-12.L Describe the issues addressed by various laws and regulations that impact or safeguard a	Key laws and regulations related to personal finance (e.g., Truth in Lending Act, Fair Credit Reporting Act,	How these laws and regulations protect consumers and regulate financial institutions	Identify and list key laws and regulations related to personal finance, along with their purposes and provisions

person's finances.	Dodd-Frank Wall Street Reform and Consumer Protection Act)		
Income			
17.2.9-12.A Explain various types of income (e.g., earned, unearned, passive, active) and their sources (e.g., work, rentals, investments, government programs).	Different types of income: earned, unearned, passive, active	How each type of income is generated and categorized	Identify and define different types of income
17.2.9-12.B Describe sources of retirement income and how they relate to individual investment choices, employer-sponsored retirement plans, and government programs.	Various sources of retirement income: - Individual investment choices (e.g., personal savings, investments) - Employer-sponsored retirement plans (e.g., 401(k), pension plans) - Government programs (e.g., Social Security, Medicare)	How each source of retirement income contributes to financial security in retirement	Identify and list sources of retirement income
17.2.9-12.C Use data to support an individual's decision to obtain or forgo post-secondary education based on the associated costs and anticipated future income.	Data points relevant to evaluating the costs of post-secondary education: tuition, fees, books, room and board, transportation	How to calculate the total cost of attending college or other post-secondary education programs	Identify and list data points for evaluating the costs of post-secondary education
17.2.9-12.D Research options to pay for education and training, ways to reduce the total cost, and steps needed to obtain financial aid.	Options to pay for education and training: Scholarships, Grants, Work-study programs, Student loans, Employer tuition assistance	How each payment option works, including eligibility criteria and repayment terms	Identify and list options to pay for education and training
17.2.9-12.E Evaluate the impacts of technology, labor markets, and economic conditions and trends on a person's employment potential.	Technological advancements shaping labor markets: automation, artificial intelligence, digitalization	How technology influences the demand for certain skills and occupations	Identify and list technological advancements affecting labor markets
17.2.9-12.F Explain the impact of employee benefits (e.g., health insurance, retirement savings plans, education reimbursement programs) on an individual's finances. ACCT 404 Calculate benefits including sick pac, vacation time, and personal time.	Common employee benefits: Health insurance, Retirement savings plans (e.g., 401(k), 403(b)), Education reimbursement programs, Paid time off (e.g., vacation, sick leave), Life insurance, Disability insurance	How each employee benefit contributes to an individual's financial well-being	Identify and list common employee benefits

ACCT 405 Compute wages, taxes, other deductions, and net pay.			
17.2.9-12.G Analyze the financial impact of a person's decision to own a business, work as an independent contractor, or be employed.	Different employment arrangements: Business ownership (e.g., sole proprietorship, partnership, corporation), Independent contractor, Traditional employment	How each employment arrangement affects income, taxes, benefits, and financial risks	Identify and list different employment arrangements
17.2.9-12.H Calculate the impact of taxes and payroll deductions on income. ACCT 404 Calculate benefits including sick pac, vacation time, and personal time. ACCT 405 Compute wages, taxes, other deductions, and net pay.	Types of taxes and payroll deductions: Federal income tax, State income tax, Social Security tax (FICA), Medicare tax (FICA), Health insurance premiums, Retirement contributions (e.g., 401(k), 403(b)), Other deductions (e.g., union dues, garnishments)	How each type of tax and deduction is calculated and deducted from income	Identify and list types of taxes and payroll deductions
17.2.9-12.I Complete various federal, state, and local tax forms.	Common tax forms: Federal: Form 1040, Form W-2, Form 1099, State: State income tax form (varies by state), Local: Local income tax form (if applicable).	How each tax form is used, what information it requires, and its purpose	Identify and list common federal, state, and local tax forms
Spending			
17.3.9-12.A Develop a process for making informed spending decisions, including factors to consider (e.g., product features, price, durability, environmental or societal impact, reliability of information).	Factors to consider when making spending decisions: Product features, Price, Durability, Environmental or societal impact, Reliability of information sources	How each factor influences spending decisions and contributes to overall value	Identify and list factors to consider when making spending decisions
17.3.9-12.B Compare ways people can lower the price they pay for goods and services (e.g., online tools, discount retailers, negotiating, secondhand items). ADMIN 204 Utilize internet and network resources. ADMIN 205 Assess, interpret, and manipulate intranet and internet research.	Methods to lower the price paid for goods and services: Utilizing online tools and apps (e.g., price comparison websites, coupon websites, cashback apps), Shopping at discount retailers and outlets, Negotiating prices with sellers or service providers, Purchasing secondhand or refurbished items	How each method can effectively reduce the price paid for goods and services	Identify and list methods to lower the price paid for goods and services

17.3.9-12.C Develop a personal approach to keeping track of income and spending.	Methods for tracking income and spending: Manual methods (e.g., pen and paper, spreadsheets), Digital tools (e.g., budgeting apps, personal finance software), Envelope system, Bank and credit card statements	How each method works and its pros and cons	Identify and list methods for tracking income and spending
17.3.9-12.D Evaluate various budgeting approaches (e.g., 50-30-20, zero-based) and methods (e.g., envelope system, spreadsheets, online tools).	Budgeting approaches: 50-30-20 rule, Zero-based budgeting	How each budgeting approach allocates income and prioritizes spending	Identify and list various budgeting approaches
17.3.9-12.E Create a personal budget to allocate current or future income, including estimates for fixed and variable expenses. ACCT 108 Operate a calculator and computer. ACCT 314 Analyze cheks and checkbook register.	Components of a personal budget: Income sources (e.g., wages, investments), Fixed expenses (e.g., rent/mortgage, utilities, insurance), Variable expenses (e.g., groceries, entertainment, transportation), Savings and debt repayment goals	How each component contributes to the overall structure and purpose of a personal budget	Identify and apply the list of components to create a personal budget
17.3.9-12.F Identify methods for adjusting a budget for unexpected expenses or loss of income.	Methods for adjusting a budget: Emergency fund, Cutting discretionary expenses, Temporary income sources (e.g., part-time job, freelance work), Negotiating payment plans or deferrals with creditors	How each method can help mitigate the impact of unexpected expenses or loss of income	Identify and list methods for adjusting a budget
17.3.9-12.G Compare the effects of using various payment methods when making purchases.	Common payment methods: Cash, Debit cards, Credit cards, Mobile payment apps, Online payment platforms	How each payment method works and its impact on personal finances	Identify and list common payment methods
17.3.9-12.H Compare various approaches to paying bills, including making automated payments and ensuring bills are paid on time.	Approaches to paying bills: Manual payments via check or cash, Online banking bill pay services, Setting up automated payments, Utilizing budgeting apps with bill tracking features	How each approach works and its advantages and disadvantages	Identify and list various approaches to paying bills

17.3.9-12.I Describe the impact of technology on payment methods and how it influences spending.	Evolution of payment methods: Traditional cash and checks, Introduction of credit and debit cards, Emergence of electronic payment systems (e.g., online banking, mobile wallets, contactless payments)	How technology has revolutionized payment methods over time	Identify and list the evolution of payment methods
17.3.9-12.J Analyze a housing decision, including comparing renting and buying, upfront and ongoing costs, and the process of obtaining a mortgage or a lease.	Housing options: Renting, Buying (Homeownership)	The differences between renting and buying, including ownership rights, responsibilities, and financial implications	Identify and list housing options: renting and buying
17.3.9-12.K Justify the purchase or lease of a vehicle and the alternatives considered (e.g., new versus used, total cost of ownership or use).	Vehicle acquisition options: Purchase (New or Used), Lease	The different methods of acquiring a vehicle and their respective advantages and disadvantages	Identify and list vehicle acquisition options
17.3.9-12.L Analyze the impact of paying sales, excise, and property taxes on financial decisions.	Types of taxes: Sales tax, Excise tax, Property tax	The nature and purpose of each type of tax, including how they are assessed and collected	Identify and list types of taxes: sales, excise, and property taxes
17.3.9-12.M Justify a decision to participate in or forgo a fundraising effort based on the organization and cause.	Fundraising efforts: Participation in charitable events or campaigns, Donations to nonprofit organizations	The various ways individuals can contribute to fundraising efforts and their potential impact	Identify and list fundraising efforts: participation in events or campaigns, donations to nonprofit organizations
Saving & Investing			
17.4.9-12.A Calculate a person's net worth given their assets and liabilities.	Components of net worth: - Assets (e.g., cash, investments, real estate, vehicles) - Liabilities (e.g., loans, mortgages, credit card debt)	The definition and components of net worth, including assets and liabilities	Identify and list components of net worth: assets and liabilities
17.4.9-12.B Develop a savings plan for accomplishing personal short- and long-term financial goals.	Types of financial goals: Short-term goals (e.g., emergency fund, vacation), Long-term goals (e.g., retirement, buying a house)	The distinction between short-term and long-term financial goals and their importance in financial planning	Identify and list types of financial goals: short-term and long-term
17.4.9-12.C Compare the features of various savings vehicles (e.g., savings accounts, certificates of deposit, money market accounts) and the interest rates offered by several institutions.	Types of savings vehicles: Savings accounts, Certificates of deposit (CDs), Money market accounts	The characteristics and purposes of each savings vehicle, including their advantages and limitations	Identify and list types of savings vehicles: savings accounts, CDs, money market accounts

17.4.9-12.D Explain factors that contribute to rates of return for various investments, including risk, inflation, and taxes.	Factors affecting rates of return: Risk, Inflation, Taxes	How each factor influences the rate of return on investments and overall investment performance	Identify and list factors contributing to rates of return: risk, inflation, taxes
17.4.9-12.E Explain the similarities and differences between stocks, bonds, mutual funds, and exchange-traded funds, and the factors that influence price fluctuations for each.	Investment vehicles:Stocks, Bonds, Mutual funds, Exchange-traded funds (ETFs)	The basic characteristics and purposes of each investment vehicle	Identify and list types of investment vehicles: stocks, bonds, mutual funds, ETFs
17.4.9-12.F Describe factors to consider when selecting sources of investment advice and trading methods (e.g., online trading platforms, financial advisors, robo-advisors).	Sources of investment advice and trading methods: Financial advisors, Online trading platforms, Robo-advisors	The various options available for obtaining investment advice and executing trades	Identify and list sources of investment advice and trading methods: financial advisors, online trading platforms, robo-advisors
17.4.9-12.G Explain how popular benchmark indices are used.	Popular benchmark indices: S&P 500, Dow Jones Industrial Average (DJIA), Nasdaq Composite	The key characteristics and significance of popular benchmark indices in the financial markets	Identify and list popular benchmark indices: S&P 500, Dow Jones Industrial Average (DJIA), Nasdaq Composite
17.4.9-12.H Recommend an investment portfolio diversified to meet specific goals, including purpose, starting age, time horizon, and tolerance for risk.	Investment portfolio components: Stocks, Bonds, Mutual funds, Exchange-traded funds (ETFs), Real estate investment trusts (REITs), Cash equivalents	The various asset classes and investment vehicles that make up a diversified portfolio	Identify and list investment portfolio components: stocks, bonds, mutual funds, ETFs, REITs, cash equivalents
17.4.9-12.I Compare retirement-specific investment options, including employer-sponsored plans, Roth and traditional individual retirement accounts, and accounts available to people who are self-employed.	Retirement-specific investment options: Employer-sponsored plans, Roth and traditional IRAs, Retirement accounts for self-employed individuals	The characteristics and purposes of each retirement-specific investment option	Identify and list retirement-specific investment options: employer-sponsored plans, Roth and traditional IRAs, retirement accounts for self-employed individuals
17.4.9-12.J Analyze personal attitudes towards risk and how these might impact future investment decisions and outcomes.	Personal attitudes towards risk: Risk tolerance, Risk aversion, Risk perception	The concepts and factors that shape personal attitudes towards risk in investment decision-making	Identify and list personal attitudes towards risk: risk tolerance, risk aversion, risk perception
17.4.9-12.K Describe methods to avoid or counteract the potentially negative impacts of behavioral biases on investment decisions.	Behavioral biases in investment decisions: Confirmation bias, Overconfidence, Loss aversion, Anchoring, Herding, Mental accounting	Common behavioral biases that can influence investment decisions and outcomes	Identify and list behavioral biases in investment decisions: confirmation bias, overconfidence, loss aversion, anchoring, herding, mental accounting

Risk & Insurance			
17.5.9-12.A Evaluate a person's potential for financial risk (e.g., loss of personal property, reduction in income, liability).	Types of financial risk: Loss of personal property, Reduction in income, Liability (e.g., legal, debt)	The various types of financial risk individuals may face and their potential consequences	Identify and list types of financial risk: loss of personal property, reduction in income, liability
17.5.9-12.B Critique approaches to avoiding, reducing, retaining, and transferring risk given a particular scenario.	Risk management approaches: Avoidance, Reduction, Retention, Transfer	The different strategies for managing financial risk and their implications	Identify and list risk management approaches: avoidance, reduction, retention, transfer
17.5.9-12.C Formulate insurance recommendations based on individual needs, situations, and preferences, including but not limited to automotive, homeowners, renters, health, life, and disability, as justified.	Types of insurance coverage: Automotive, Homeowners, Renters, Health, Life, Disability	The different types of insurance coverage available and their purposes	Identify and list types of insurance coverage: automotive, homeowners, renters, health, life, disability
17.5.9-12.D Use information from various sources to compare insurance providers, plans, and prices.	Sources of insurance information: Insurance company websites, Insurance comparison websites, Consumer reports and reviews, Insurance agents and brokers, State insurance departments	The different sources available for obtaining information about insurance providers, plans, and prices	Identify and list sources of insurance information: insurance company websites, insurance comparison websites, consumer reports and reviews, insurance agents and brokers, state insurance departments
17.5.9-12.E Formulate a process of comparing insurance products, determining out-of-pocket costs, and filing claims.	Steps in comparing insurance products: Identify insurance needs, Gather information on available products, Compare coverage, premiums, and deductibles, Review policy terms and conditions, Consider additional features and benefits	The sequential steps involved in comparing insurance products effectively	Identify and list steps in comparing insurance products: identifying insurance needs, gathering information, comparing coverage, premiums, and deductibles, reviewing policy terms and conditions, and considering additional features and benefits
17.5.9-12.F Describe circumstances in which a person may be required to show proof of insurance or obtain a minimum amount of coverage.	Common situations requiring proof of insurance: Vehicle registration or renewal, Obtaining a mortgage or renting property, Applying for certain jobs, Participating in certain activities or events, Starting a business	The various circumstances in which individuals may be required to show proof of insurance	Identify and list common situations requiring proof of insurance: vehicle registration or renewal, obtaining a mortgage or renting property, applying for certain jobs, participating in certain activities or events, starting a business
17.5.9-12.G Evaluate the impact of public insurance programs for individuals facing financial hardship (e.g., Medicare,	Public insurance programs for individuals facing financial hardship: Medicare, Medicaid, Unemployment	The purpose and scope of public insurance programs and their importance for individuals facing	Identify and list public insurance programs for individuals facing financial hardship: Medicare, Medicaid,

Medicaid, and unemployment).	insurance	financial hardship	unemployment insurance
17.5.9-12.H Analyze trends in financial fraud and strategies to avoid becoming a victim.	Common types of financial fraud: Identity theft, Phishing scams, Investment fraud, Credit card fraud, Ponzi schemes	The various methods used in financial fraud and their characteristics	Identify and list common types of financial fraud: identity theft, phishing scams, investment fraud, credit card fraud, Ponzi schemes
17.5.9-12.I Research the agencies individuals can contact and steps they can take to address financial fraud and scams, including identity theft.	Key agencies individuals can contact: Federal Trade Commission (FTC), Consumer Financial Protection Bureau (CFPB), Securities and Exchange Commission (SEC), Internet Crime Complaint Center (IC3), State Attorney General's Office	The roles and responsibilities of key agencies in addressing financial fraud and scams	Identify and list key agencies individuals can contact to address financial fraud and scams, including the Federal Trade Commission (FTC), Consumer Financial Protection Bureau (CFPB), Securities and Exchange Commission (SEC), Internet Crime Complaint Center (IC3), and State Attorney General's Office
Credit			
17.6.9-12.A Evaluate pathways to obtaining credit and what lenders look for in a borrower (e.g., character, capacity, capital, collateral).	Pathways to Obtaining Credit: Traditional financial institutions (banks, credit unions), Online lenders, Credit cards, Peer-to-peer lending platforms	The various avenues individuals can explore to obtain credit and the different types of lenders available	Identify and list pathways to obtaining credit, including traditional financial institutions, online lenders, credit cards, and peer-to-peer lending platforms
17.6.9-12.B Describe how credit reports and scores are determined, used, and improved.	Credit Reports and Scores Determination: Credit reports: Compiled by credit bureaus, they include information about an individual's credit history, such as payment history, credit utilization, length of credit history, types of credit accounts, and recent inquiries. Credit scores: Calculated based on the information in credit reports using mathematical models (e.g., FICO score, VantageScore). Scores typically range from 300 to 850, with higher scores indicating better creditworthiness.	The factors that influence credit reports and scores, including payment history, credit utilization, length of credit history, types of credit accounts, and recent credit inquiries. Understand how credit scores are calculated and the significance of different score ranges.	Understand how credit reports and scores are determined, the key factors that influence them, and the significance of credit score ranges

17.6.9-12.C Compare various forms of credit and how each is used (e.g., secured and unsecured loans, installment and revolving credit, service credit).	Forms of Credit: Secured loans: Backed by collateral, such as a home or car, which the lender can seize if the borrower defaults. Unsecured loans: Not backed by collateral, relying solely on the borrower's creditworthiness to qualify. Installment credit: Borrower receives a fixed amount of money and agrees to make regular payments (installments) over a predetermined period until the loan is repaid. Revolving credit: Allows borrowers to repeatedly borrow up to a certain credit limit and repay the debt over time. Credit cards are a common example. Service credit: Extended by service providers, allowing consumers to pay for services rendered over time, such as utility bills or medical expenses.	The characteristics and uses of different forms of credit, including secured and unsecured loans, installment and revolving credit, and service credit. Understand the implications of each type of credit on borrowing and repayment.	Understand the distinctions between various forms of credit and their respective uses, considering factors such as interest rates, repayment terms, and collateral requirements.
17.6.9-12.D Analyze the use of loans to finance higher education and home purchases, how they are obtained, and options for paying them back.	Use of Loans for Higher Education and Home Purchases: Student loans: Borrowed to finance college or university education expenses, including tuition, books, and living expenses. Mortgage loans: Used to purchase a home or real estate property, with the property serving as collateral for the loan.	The purposes and characteristics of student loans and mortgage loans, including eligibility criteria, interest rates, and repayment terms. Understand the implications of borrowing for higher education and home purchases on long-term financial well-being.	Understand the specific uses of student loans and mortgage loans, including their role in financing higher education and homeownership. Recognize the importance of responsible borrowing and repayment planning.
17.6.9-12.E Calculate the total cost of credit given a variety of situations (e.g., making minimum payments, paying fees, using alternative financial service providers).	Total Cost of Credit Calculation: Total cost of credit: The sum of all interest charges, fees, and other costs associated with borrowing money. It includes both the principal amount borrowed and any additional charges incurred during the loan term.	The components contributing to the total cost of credit, such as interest rates, fees, and repayment terms. Understand how different borrowing scenarios can affect the overall cost of credit.	Understand the methodology for calculating the total cost of credit in various borrowing situations. Recognize the impact of interest rates, fees, and repayment terms on the total amount paid for borrowing.

17.6.9-12.F Describe the consequences of failing to repay debts and sources of debt management assistance.	Consequences of Failing to Repay Debts: Negative impact on credit score: Missed payments and defaults can lower credit scores, making it harder to qualify for future loans or credit cards. Collection actions: Lenders may pursue legal action, such as wage garnishment or asset seizure, to recover unpaid debts. Increased interest rates and fees: Defaulting on loans can lead to higher interest rates and additional fees, exacerbating financial difficulties.	The potential repercussions of failing to repay debts, including damage to creditworthiness, legal consequences, and increased financial costs. Understand the importance of timely debt repayment and proactive debt management strategies.	Recognize the seriousness of failing to repay debts and the long-term consequences it can have on financial stability. Understand the rights and protections available to debtors facing collection actions.
17.6.9-12.G Evaluate various rights and laws related to credit and their impact on consumers.	Rights and Laws Related to Credit: Fair Credit Reporting Act (FCRA): Regulates the collection, dissemination, and use of consumer credit information, including credit reporting agencies' responsibilities and consumers' rights to access and dispute credit reports.Truth in Lending Act (TILA): Requires lenders to disclose key terms and costs of credit transactions, including APR (annual percentage rate), finance charges, and total loan costs, to help consumers make informed borrowing decisions. Equal Credit Opportunity Act (ECOA): Prohibits discrimination in credit transactions based on race, color, religion, national origin, sex, marital status, age, or receipt of public assistance. Fair Debt Collection Practices Act (FDCPA): Regulates the behavior of debt collectors and prohibits abusive, deceptive, and unfair practices in debt collection activities.Consumer Credit Protection	The provisions and purposes of key credit-related laws, including the FCRA, TILA, ECOA, FDCPA, and CCPA. Understand how these laws protect consumers' rights, promote transparency in lending practices, and prevent abusive debt collection practices.	Assess the impact of credit-related laws on consumer rights and financial well-being. Understand the legal protections available in credit transactions and how to assert

	Act (CCPA): Encompasses various consumer credit protection laws, including the FCRA, TILA, ECOA, and FDCPA, to safeguard consumers' rights in credit transactions.		
Career Awareness & Preparation			
13.1.11.A Relate careers to individual interests, abilities, and aptitudes.	Careers: Various occupations, professions, and fields of work available to individuals.	The relationship between careers and individual interests, abilities, and aptitudes. Understand how personal interests, skills, and strengths align with different career paths.	Relate personal interests, abilities, and aptitudes to potential career options. Explore different occupations and fields of work to identify suitable career paths based on individual strengths and preferences.
B. Analyze career options based on personal interests, abilities, aptitudes, achievements and goals	Various factors influence career decisions, including personal interests, abilities, aptitudes, achievements, and goals.	The correlation between personal attributes (interests, abilities, aptitudes, achievements, and goals) and career choices. Recognize how each factor plays a role in determining suitable career options.	Analyze personal interests, abilities, aptitudes, achievements, and goals to evaluate and select appropriate career options. Research and explore various careers to find alignment with individual strengths, preferences, and aspirations.
C. Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.	The workplace is constantly evolving due to technological advancements, globalization, and changing societal needs.	The relationship between evolving workplace dynamics and the emergence of new opportunities within career choices. Understand how shifts in job roles, skills demand, and industry trends create novel career pathways.	Analyze the changing roles of individuals in the workplace to identify new opportunities within career choices. Explore how emerging technologies, market trends, and evolving job demands open doors to diverse career possibilities. Adapt to changing workplace dynamics by acquiring relevant skills and knowledge to capitalize on new career opportunities.

D. Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: Career days Career portfolio Community service Cooperative education Graduation/senior project Internship Job shadowing Part-time employment Registered apprenticeship School-based enterprise	School-based opportunities for career awareness/preparation encompass various activities and programs designed to introduce students to different career paths and develop essential career-related skills.	The importance of school-based opportunities in fostering career awareness and preparation among students. Understand how exposure to various careers and hands-on experiences can help students make informed career decisions and acquire valuable skills for future success.	Engage in school-based opportunities for career awareness/preparation, such as career fairs, job shadowing, internships, and career exploration workshops. Take advantage of resources and support provided by schools to explore different career options, develop essential skills, and plan for future career pathways.
E. Justify the selection of a career.	Justifying the selection of a career involves identifying and evaluating factors that influence career decisions, including personal interests, values, skills, aptitudes, and future goals.	The significance of justifying the selection of a career based on individual interests, values, skills, aptitudes, and future aspirations. Understand how aligning a career choice with personal attributes and long-term goals can lead to job satisfaction and career success.	Justify the selection of a career by assessing personal interests, values, skills, aptitudes, and future goals. Consider how each factor contributes to a fulfilling and rewarding career path. Make informed decisions that align with individual strengths, passions, and aspirations, while also considering potential career growth and opportunities for advancement.
F. Analyze the relationship between career choices and career preparation opportunities, such as, but not limited to: • Associate degree • Baccalaureate degree • Certificate/licensure • Entrepreneurship • Immediate part/full time employment • Industry training • Military training • Professional degree • Registered apprenticeship • Tech Prep • Vocational rehabilitation centers	Career preparation opportunities encompass various activities and programs designed to equip individuals with the skills, knowledge, and experiences necessary for successful career development.	The interconnection between career choices and career preparation opportunities. Understand how career choices influence the selection and utilization of career preparation opportunities, and vice versa. Recognize the importance of aligning career choices with relevant career preparation opportunities to enhance employability and future success.	Analyze the relationship between career choices and available career preparation opportunities. Evaluate how different career paths align with potential career preparation activities, such as internships, apprenticeships, educational programs, and skill development workshops. Make informed decisions about pursuing career preparation opportunities that best match individual career goals, interests, and aspirations.

G. Assess the implementation of the individualized career plan through the ongoing development of the career portfolio	An individualized career plan outlines a person's career goals, aspirations, and steps for achieving them, while a career portfolio is a collection of documents and artifacts showcasing one's skills, accomplishments, and experiences related to their career development.	The importance of assessing the implementation of the individualized career plan through the ongoing development of the career portfolio. Understand how maintaining a career portfolio allows individuals to track their progress, reflect on their achievements, and adapt their career plans accordingly.	Assess the implementation of your individualized career plan by regularly updating and expanding your career portfolio. Reflect on your career goals, achievements, and experiences to ensure they align with your long-term aspirations. Use feedback from mentors, educators, and industry professionals to refine and enhance your career portfolio and career plan as needed.
H. Review personal high school plan against current personal career goals and select postsecondary opportunities based upon personal career interests.	A personal high school plan is a structured roadmap outlining a student's academic goals, coursework, extracurricular activities, and career aspirations during their high school years. Reviewing this plan involves assessing its alignment with current personal career goals. Postsecondary opportunities refer to various options for continuing education or training after high school, such as colleges, universities, technical schools, apprenticeships, or workforce training programs.	The significance of reviewing the personal high school plan against current personal career goals and selecting postsecondary opportunities based on personal career interests. Understand how aligning high school plans with career goals can help students make informed decisions about their educational pathways and future careers.	Review your personal high school plan to ensure it aligns with your current career goals and aspirations. Consider your interests, skills, and desired career path when selecting postsecondary opportunities. Explore different options, such as colleges, universities, technical schools, apprenticeships, or workforce training programs, that best match your career interests and goals. Make informed decisions about your postsecondary education or training based on your personal career interests and objectives.
13.2.11. A. Apply effective speaking and listening skills used in a job interview.	- The structure of a job interview (e.g., introduction, body, conclusion).	- Effective speaking and listening are crucial components of a successful job interview.	- Practice and demonstrate effective speaking skills:
B. Apply research skills in searching for a job. • CareerLinks • Internet (i.e. O*NET) • Networking • Newspapers • Professional associations • Resource books MKTG 305 Research career and educational opportunities in marketing or business.	- Different methods for job searching (e.g., online job boards, networking, company websites, job fairs). - Key components of a job listing (e.g., job title, responsibilities, qualifications, application instructions). - Various sources of job market information (e.g., industry reports, labor statistics, company profiles).	- Research skills are essential for identifying suitable job opportunities and making informed decisions. - A thorough understanding of job requirements and company culture can increase the chances of job search success. - Networking and personal	- Identify and utilize various job search methods: - Use online job boards to find relevant job listings. - Attend job fairs and networking events to discover opportunities.

		connections are valuable resources in the job search process.	
C. Develop and assemble, for career portfolio placement, career acquisition documents, such as, but not limited to: • Job application • Letter of appreciation following an interview • Letter of introduction • Postsecondary education/training applications • Request for letter of recommendation • Resume MKTG 301 Prepare a resume for a specific job in marketing or business. MKTG 302 Prepare a cover letter for a specific job in the field of marketing or business. MKTG 303 Complete a job application for a specific job in the field or marketing or business. MKTG 304 Prepare for a job interview in the field of marketing or business. ADMIN 301 Utilize templates to prepare documents. ADMIN 308 Create, edit, and format documents.	- The types of career acquisition documents (e.g., resume, cover letter, references, thank-you notes). - The essential components of a resume (e.g., contact information, summary, work experience, education, skills). - How to format and organize career acquisition documents professionally.	- Well-prepared career acquisition documents are crucial for making a positive impression on potential employers. - Tailoring documents to specific job opportunities increases the chances of securing an interview. - Assembling documents into a career portfolio provides a comprehensive overview of qualifications and achievements.	- Create a professional resume that highlights relevant skills, experiences, and accomplishments - Write a tailored cover letter that addresses the specific job and company, explaining why you are a suitable candidate. - Draft a thank-you note to send after an interview, expressing appreciation and reiterating interest in the position.
D. Analyze, revise, and apply an individualized career portfolio to chosen career path.	- The components of a career portfolio (e.g., resume, cover letter, references, certifications, work samples). - Criteria for evaluating the effectiveness of career portfolio documents.	- A well-maintained and up-to-date career portfolio is essential for career development and job search success. - Tailoring the career portfolio to align with the specific requirements and expectations of the chosen career path enhances job prospects.	- Regularly review and update the resume to reflect new skills, experiences, and accomplishments relevant to the chosen career path. - Revise the cover letter to ensure it is tailored to specific job applications and reflects current career goals.

E. Demonstrate, in the career acquisition process, the application of essential workplace skills/knowledge, such as, but not limited to: • Commitment • Communication • Dependability • Health/safety • Laws and regulations (that is Americans With Disabilities Act, child labor laws, Fair Labor Standards Act, OSHA, Material Safety Data Sheets) • Personal initiative • Self-advocacy • Scheduling/time management • Team building • Technical literacy • Technology MKTG 307 Participate in a job interview. ADMIN 802 Apply electronics and phone communications etiquette. ADMIN 803 Use scheduing and contact management software.	- Essential workplace skills (e.g., communication, teamwork, problem-solving, time management, adaptability). - Basic workplace knowledge (e.g., organizational structures, common industry practices, workplace etiquette).	- Essential workplace skills are critical for success in the career acquisition process and on the job. - The ability to effectively apply workplace skills and knowledge can differentiate candidates in the job market.	- Demonstrate effective communication skills in resumes, cover letters, and interviews. - Showcase teamwork and collaboration skills through examples in application materials and during interviews.
Career Retention & Advancement			
13.3.11.A. Evaluate personal attitudes and work habits that support career retention and advancement. ADMIN 905 Use interpersonal communication skills in a diverse work environment.	- Key personal attitudes that support career success (e.g., positivity, resilience, motivation). - Essential work habits for career retention and advancement (e.g., punctuality, reliability, continuous learning, professionalism). - The role of work-life balance in maintaining job performance and satisfaction.	- Positive attitudes and strong work habits are critical for career retention and advancement. - Attitudes and habits influence job satisfaction, workplace relationships, and career progression. - Work-life balance contributes to sustained productivity and career satisfaction.	- Self-assess to identify personal attitudes and work habits that impact career performance. - Set personal goals to improve attitudes and work habits that need development. - Practice effective time management and organizational skills to enhance productivity. - Develop and demonstrate effective

	- Techniques for effective communication and teamwork in the workplace.	- Effective communication and teamwork enhance workplace relationships and career opportunities.	communication skills in various workplace scenarios.
B. Evaluate team member roles to describe and illustrate active listening techniques: • Clarifying • Encouraging • Reflecting • Restating • Summariizing	- Different team member roles and their responsibilities (e.g., leader, facilitator, recorder, contributor). - The impact of non-verbal communication on active listening (e.g., eye contact, body language, nodding). - Techniques for providing constructive feedback and encouraging open communication.	- Active listening is essential for effective teamwork and collaboration. - Understanding and valuing different perspectives within the team enhance the overall team performance. - Effective communication among team members, including active listening, leads to better decision-making and problem-solving.	- Identify and describe various team member roles and their specific responsibilities within a team. - Address and mitigate barriers to active listening in team interactions. - Apply active listening techniques such as paraphrasing, summarizing, and asking clarifying questions during team discussions.
C. Evaluate conflict resolution skills as they relate to the workplace: • Constructive criticism • Group dynamics • Managing/leadership • Mediation • Negotiation • Problem solving	- Key conflict resolution skills (e.g., active listening, empathy, problem-solving, negotiation, assertiveness). - Common causes of workplace conflicts (e.g., miscommunication, differing values, competition for resources). - Techniques for mediating conflicts (e.g., finding common ground, focusing on interests rather than positions, seeking win-win solutions). - The role of effective communication in preventing and resolving conflicts.	- Effective conflict resolution skills are essential for maintaining a productive and harmonious workplace. - Different conflicts require different resolution strategies depending on the context and the parties involved. - Constructive conflict resolution can lead to stronger relationships, improved collaboration, and increased productivity. - Unresolved conflicts can escalate and negatively impact team dynamics and workplace morale.	- Identify and describe various conflict resolution skills and their importance in the workplace. - Apply active listening and empathy when addressing conflicts to understand all perspectives involved. - Use problem-solving techniques to identify the root cause of conflicts and generate mutually acceptable solutions. - Implement negotiation strategies to reach fair and balanced agreements in conflict situations.

D. Develop a personal budget based on career choice, such as, but not limited to: • Charitable contributions • Fixed/variable expenses • Gross pay • Net pay • Other income • Savings • Taxes	- Components of a personal budget (e.g., income, expenses, savings, investments). - Common types of expenses (e.g., housing, transportation, groceries, utilities, entertainment). - Strategies for tracking and managing expenses (e.g., budgeting apps, spreadsheets, expense tracking tools). - Importance of setting financial goals (e.g., saving for retirement, paying off debt, buying a home). - Strategies for reducing expenses and increasing savings (e.g., cutting unnecessary costs, negotiating bills, increasing income).	- Developing a personal budget is essential for financial planning and achieving long-term financial goals. - Understanding income and expenses helps in creating a balanced budget that aligns with financial priorities and lifestyle choices. - Budgeting allows individuals to allocate resources effectively, save for emergencies, and plan for future expenses. - Setting realistic financial goals provides motivation and direction for budgeting and financial decision-making. - Making informed financial decisions and prioritizing needs over wants are essential for budgeting success.	- Identify sources of income based on the chosen career path, including salary, bonuses, and other forms of compensation. - List and categorize all expected expenses, including fixed costs (e.g., rent, insurance) and variable costs (e.g., groceries, dining out). - Calculate net income by subtracting total expenses from total income, ensuring that expenses do not exceed income. - Allocate a portion of income toward savings and investments to achieve financial goals, such as retirement or buying a home. - Review and adjust the budget regularly to accommodate changes in income, expenses, and financial goals.
E. Evaluate time management strategies and their application to both personal and work situations.	- Common time management strategies (e.g., prioritization, goal setting, scheduling, delegation, procrastination management). - Techniques for setting SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals. - Methods for creating and maintaining schedules (e.g., daily planners, digital calendars, time-blocking).	- Effective time management is crucial for productivity, efficiency, and achieving goals in both personal and work contexts. - Setting clear and achievable goals provides direction and motivation for managing time effectively. - Creating and following a schedule helps individuals allocate time effectively and reduce	- Identify personal and work-related tasks and prioritize them based on urgency and importance. - Set SMART goals for both personal and work-related tasks to ensure clarity and focus in time management efforts. - Use a daily planner or digital calendar to schedule tasks and allocate specific time slots for completing them. - Allocate time for personal activities and

	- The importance of time management in achieving work-life balance.	procrastination. - Effective time management allows individuals to allocate time for work, personal activities, and relaxation, leading to improved well-being.	self-care to maintain a healthy work-life balance, ensuring time is not solely focused on work-related tasks.
F. Evaluate strategies for career retention and advancement in response to the changing global workplace.	- Strategies for career retention (e.g., ongoing learning, networking, performance improvement, adaptability). - Techniques for staying relevant and competitive in a changing global marketplace (e.g., acquiring new skills, staying updated on industry trends, expanding professional network). - Importance of networking and building professional relationships for career growth.	- The global workplace is dynamic and requires individuals to continuously adapt and evolve to remain competitive. - Adapting to changes in the global workplace requires proactive strategies for skill development and networking. - Networking provides access to opportunities, mentorship, and industry insights essential for career advancement.	- Identify and research strategies for career retention and advancement in response to global workplace changes. - Engage in continuous learning and skill development to stay abreast of industry trends and emerging technologies. - Actively participate in professional networking events, conferences, and online communities to expand professional network and opportunities.
G. Evaluate the impact of lifelong learning on career retention and advancement.	- Concepts and benefits of lifelong learning (e.g., acquiring new skills, staying updated on industry trends, personal and professional growth). - Strategies for integrating lifelong learning into career development plans. - The impact of continuous learning on job satisfaction, employability, and career advancement opportunities.	- Lifelong learning is essential for career growth and longevity in today's fast-paced and evolving job market. - Incorporating lifelong learning into career development plans ensures ongoing skill development and career progression. - Lifelong learning contributes to increased job satisfaction, enhanced employability, and expanded career advancement opportunities.	- Research and gather information about the importance and benefits of lifelong learning for career retention and advancement. - Develop a personalized learning plan that aligns with career goals and aspirations, outlining specific skills and knowledge to acquire through lifelong learning activities. - Actively participate in lifelong learning activities to improve job performance, expand professional networks, and increase opportunities for career advancement.
Entrepreneurship			

A. Analyze entrepreneurship as it relates to personal career goals and corporate opportunities.	- Types of entrepreneurial ventures (e.g., startups, small businesses, social enterprises, franchises). - The role of entrepreneurship in driving innovation and economic growth.	- Entrepreneurial ventures vary in size, scope, and purpose, offering different opportunities for personal career growth and corporate partnerships. - Entrepreneurship plays a critical role in driving innovation, creating new markets, and fueling economic growth, benefiting both individuals and corporations.	- Explore different types of entrepreneurial ventures and identify their potential alignment with personal career goals and corporate opportunities. - Analyze case studies and examples of successful entrepreneurial ventures to understand their impact on innovation and economic development.
B. Analyze entrepreneurship as it relates to personal character traits.	- Concepts and characteristics of entrepreneurship (e.g., innovation, risk-taking, opportunity recognition, business ownership).	- Entrepreneurship offers individuals opportunities to pursue personal career goals through business ownership and innovation, while also presenting corporate opportunities for collaboration and growth.	- Research and understand the principles and traits associated with entrepreneurship, including risk-taking, creativity, and adaptability.

Unit Plans

Financial Literacy & Career Exploration DASD Unit Map
Unit 1: Financial Goals & Money Management Tools

Subject:	Financial Literacy & Career Exploration	**Grade Level:**	10th	**Duration:**	90 days

Key Learnings	*-Creating a plan to reach financial goals is critical to success. Each person's plan must be tailored to their unique circumstances.* *-Many tools exist to help people reach their financial goals. People can select from all of these tools to help reach their goals.*

Unit Essential Question:	How does a person set and reach their personal financial goals?

Identified Standards Addressed in the Unit:
17.1.9-12.A Determine the financial impact of various long-term goals (e.g., lifestyle, family, education).
17.1.9-12.B Apply a systematic decisionmaking process, including opportunity costs, to setting and achieving financial goals.
17.1.9-12.C Analyze the impact of various factors on a person's financial mindset and decisions.
17.1.9-12.D Evaluate strategies for dealing with behavioral biases and other obstacles to managing personal finances.
17.1.9-12.E Assess the value of sharing financial goals and information with others.
17.1.9-12.F Compare various financial service providers and the types of accounts and services each provides.
17.1.9-12.G Communicate the process of opening financial accounts and the factors to consider when selecting financial institutions and professionals.
17.1.9-12.H Evaluate the use of financial technology to access financial services and make financial decisions.
17.1.9-12.I Develop a system for documenting and organizing personal financial records, both paper and electronic.
17.1.9-12.J Explain the financial implications of wills, powers of attorney, and naming beneficiaries for various accounts.
17.1.9-12.K Explain the role of various state and federal financial regulators and consumer protection agencies.
17.1.9-12.L Describe the issues addressed by various laws and regulations that impact or safeguard a person's finances.

Identified Eligible Content Addressed in the Unit:

Know (Concepts):	Do (Competencies):
Developing and planning for short, medium, and long-term financial goals is critical to achieving them.	Set personal financial goals based on a variety of circumstances.
Various financial service providers (e.g., banks, credit unions, check cashers, brokerage firms) can assist in helping people reach their financial goals.	Determine which financial services providers can help to meet personal financial goals, including local services available in our community.
Steps involved in opening different types of financial accounts (e.g., checking, savings, investment accounts)	Explain how to open various bank accounts.
Types of personal financial records (e.g., bank statements, tax documents, receipts, bills)	Identify different types of personal financial records that need to be documented and organized.
Definitions and purposes of wills, powers of attorney, and beneficiaries	Identify and define wills, powers of attorney, and beneficiaries, and their roles in financial planning.
Names and functions of key state and federal financial regulators and consumer protection agencies (e.g., SEC, FDIC, CFPB)	Identify and list key financial regulators and consumer protection agencies, along with their roles and functions.
Key laws and regulations related to personal finance (e.g., Truth in Lending Act, Fair Credit Reporting Act, Dodd-Frank Wall Street Reform and Consumer Protection Act)	Identify and list key laws and regulations related to personal finance, along with their purposes and provisions.

Unit Key vocabulary	SMART Goals, assets, investment, liabilities, labor market, capital market, recession, purchasing power, employment market, opportunity cost, CPA. CFP. financial planning, bank, credit union, FDIC, SEC, Truth in Lending

Sample Unit Activating Strategy	*-Students create a vision board for their future life with a personal "money motto."* *-Students complete a T/F quiz on money facts and myths.*

	Lesson 1	Lesson 2	Lesson 3
Duration	2 classes	3 classes	2 classes
Lesson Essential Question(s)	What are my personal goals?	How can I create a financial plan to help me reach my future goals?	What tools are available to help me reach my financial goals?
Key Lesson Vocabulary	SMART Goal	assets, investment, liability, labor market, recession, purchasing power, employment market, opportunity cost	CPA, CFP, bank, credit union, FDIC, SEC, Truth in Lending, will, power of attorney, capital market, credit
Assessment	Write a SMART goal. Smart Futures #1, 2, 3	Create a sample financial plan to reach future goals.	Select appropriate tools to reach various financial goals.

	Lesson 4	Lesson 5	Lesson 6
Duration	2 classes		
Lesson Essential Question(s)	How do I keep track of my progress towards my financial goals?		
Key Lesson Vocabulary	financial planning		
Assessment	Evaluate various methods of tracking progress towards financial goals.		

Authentic, Varied, and Frequent Assessment Types
Common Pre-Assessment (If applicable):
Common Summative Assessment:

Unit 1 Test SMART Goals Project
Unit Success Criteria:
Successfully complete the project and Smart Futures Activities #1, #2, and #3. Pass Unit 1 Test with a 75% or higher.

Resources
NEFE Booklets & Activities SmartFutures Activities #1, #2, and #3. *Personal Finance* by Guy Buker, Jerrie Muir & Erin Thomas (Hard Copy or online version) Calculator iPads and/or Desktop Computers

Scaffolds and Enrichment		
Struggling Learners	**Multilingual Learners**	**Advanced Learners**
PDF Text (ReadAloud via iPad) Links to Resources in Schoology	PDF Text (Translation via Google Translate) Links to Resources in Schoology	Enrichment Activities to Extend Content

Financial Literacy & Career Exploration DASD Unit Map
Unit 2: Income & Earning Power

Subject:	Financial Literacy & Career Exploration	**Grade Level:**	10th	**Duration:**	90 days

Key Learnings	*-Earned income is affected by the job market, taxes, and other payroll deductions.* *-Benefits are an important component of compensation to be considered as part of your financial plan.*

Unit Essential Question:	How do career choices impact the income and other benefits a person earns?

Identified Standards Addressed in the Unit:
17.2.9-12.A Explain various types of income (e.g., earned, unearned, passive, active) and their sources (e.g., work, rentals, investments, government programs).
17.2.9-12.B Describe sources of retirement income and how they relate to individual investment choices, employer-sponsored retirement plans, and government programs.
17.2.9-12.C Use data to support an individual's decision to obtain or forgo post-secondary education based on the associated costs and anticipated future income.
17.2.9-12.D Research options to pay for education and training, ways to reduce the total cost, and steps needed to obtain financial aid.

17.2.9-12.E Evaluate the impacts of technology, labor markets, and economic conditions and trends on a person's employment potential.
17.2.9-12.F Explain the impact of employee benefits (e.g., health insurance, retirement savings plans, education reimbursement programs) on an individual's finances. ACCT 404 Calculate benefits including sick pac, vacation time, and personal time. ACCT 405 Compute wages, taxes, other deductions, and net pay.
17.2.9-12.G Analyze the financial impact of a person's decision to own a business, work as an independent contractor, or be employed.
17.2.9-12.H Calculate the impact of taxes and payroll deductions on income. ACCT 404 Calculate benefits including sick pac, vacation time, and personal time. ACCT 405 Compute wages, taxes, other deductions, and net pay.
17.2.9-12.I Complete various federal, state, and local tax forms.

Identified Eligible Content Addressed in the Unit:

Know (Concepts):	**Do (Competencies):**
Different types of income exist: earned, unearned, passive, active, retirement, and investment.	Identify and define different types of income.
How to evaluate the costs and benefits of post-secondary education: tuition, fees, books, room and board, transportation vs. potential income.	Evaluate the costs and benefits of post-secondary education for a variety of career options.
Options to pay for education and training: Scholarships, Grants, Work-study programs, Student loans, Employer tuition assistance	Identify and list options to pay for education and training
How technological advancements are shaping labor markets: automation, artificial intelligence, digitalization	Identify and list technological advancements affecting labor markets in a variety of industries
Common employee benefits: Health insurance, Retirement savings plans (e.g., 401(k), 403(b)), Education reimbursement programs, Paid time off (e.g., vacation, sick leave), Life insurance, Disability insurance	Identify and list common employee benefits
Different employment arrangements: Business ownership (e.g., sole proprietorship, partnership, corporation), Independent contractor, Traditional employment	Identify and list different employment arrangements
Types of taxes and payroll deductions: Federal income tax, State income tax, Social Security tax (FICA), Medicare tax (FICA), Health insurance premiums, Retirement contributions (e.g., 401(k), 403(b)), Other	Identify and list types of taxes and payroll deductions

deductions (e.g., union dues, garnishments)	
Common tax forms: Federal: Form 1040, Form W-2, Form 1099, State: State income tax form, Local: Local income tax form	Identify and list common federal, state, and local tax forms

Unit Key vocabulary	earned income, tuition, benefits, pension, 401K, health insurance, Social Security taxes, federal income tax, state income tax, local income tax, salary, wage, contract, at-will employment, gig economy, overtime. career cluster, apprenticeship, vacation, sick leave, disability, FMLA

Sample Unit Activating Strategy	*-Evaluate a pay stub to determine what percentage of income becomes "take home pay."* *-Play a matching game to match the average salary to a variety of different job titles.*

	Lesson 1	**Lesson 2**	**Lesson 3**
Duration	3 days	3 days	2 days
Lesson Essential Question(s)	What are some careers that interest me?	What kind of income can I earn in the various careers that interest me?	How much postsecondary training do I need for my chosen field?
Key Lesson Vocabulary	career cluster, contract, at-will employment, gig economy	salary, wage	tuition, apprenticeship
Assessment	SmartFutures #5 & #7	Research Project	Research Project

	Lesson 4	**Lesson 5**	**Lesson 6**
Duration	3 days	3 days	
Lesson Essential Question(s)	How do I calculate take-home pay when considering different job options?	What are some typical job benefits I should consider when seeking employment?	
Key Lesson Vocabulary	Social Security taxes, federal income tax, state income tax, local income tax	health insurance, pension, 401K, vacation, sick leave, disability, FMLA	

Assessment	Calculate payroll deductions (formative and summative options)		Evaluate how each benefit impacts financial goals from Unit 1.		

Authentic, Varied, and Frequent Assessment Types
Common Pre-Assessment (If applicable):
Common Summative Assessment:
Unit 2 Test Job Opportunities Project
Unit Success Criteria:
Pass Unit 2 Test with a 75% or higher. Successfully complete SmartFutures #5 and #7 and project.

Resources
NEFE Booklets & Activities SmartFutures Activities #5, #7 *Personal Finance* by Guy Buker, Jerrie Muir & Erin Thomas (Hard Copy or online version) Calculator iPads and/or Desktop Computers

Scaffolds and Enrichment		
Struggling Learners	**Multilingual Learners**	**Advanced Learners**
PDF Text (ReadAloud via iPad) Links to Resources in Schoology	PDF Text (Translation via Google Translate) Links to Resources in Schoology	Enrichment Activities to Extend Content

Financial Literacy & Career Exploration DASD Unit Map
Unit 3: Spending & Credit

Subject:	Financial Literacy & Career Exploration	**Grade Level:**	10th	**Duration:**	90 days

Key Learnings	*-Budgets help people make spending choices aligned with their personal financial goals.* *-Used strategically, credit is a financial tool that can help people reach their financial goals.*

Unit Essential Question:	How can choices about spending money help people reach their financial goals?

Identified Standards Addressed in the Unit:

17.3.9-12.A Develop a process for making informed spending decisions, including factors to consider (e.g., product features, price, durability, environmental or societal impact, reliability of information).
17.3.9-12.B Compare ways people can lower the price they pay for goods and services (e.g., online tools, discount retailers, negotiating, secondhand items). ADMIN 204 Utilize internet and network resources. ADMIN 205 Assess, interpret, and manipulate intranet and internet research.
17.3.9-12.C Develop a personal approach to keeping track of income and spending.
17.3.9-12.D Evaluate various budgeting approaches (e.g., 50-30-20, zero-based) and methods (e.g., envelope system, spreadsheets, online tools).
17.3.9-12.E Create a personal budget to allocate current or future income, including estimates for fixed and variable expenses. ACCT 108 Operate a calculator and computer. ACCT 314 Analyze cheks and checkbook register.
17.3.9-12.F Identify methods for adjusting a budget for unexpected expenses or loss of income.
17.3.9-12.G Compare the effects of using various payment methods when making purchases.
17.3.9-12.H Compare various approaches to paying bills, including making automated payments and ensuring bills are paid on time.
17.3.9-12.I Describe the impact of technology on payment methods and how it influences spending.
17.3.9-12.J Analyze a housing decision, including comparing renting and buying, upfront and ongoing costs, and the process of obtaining a mortgage or a lease.
17.3.9-12.K Justify the purchase or lease of a vehicle and the alternatives considered (e.g., new versus used, total cost of ownership or use).
17.3.9-12.L Analyze the impact of paying sales, excise, and property taxes on financial decisions.
17.3.9-12.M Justify a decision to participate in or forgo a fundraising effort based on the organization and cause.
17.6.9-12.A Evaluate pathways to obtaining credit and what lenders look for in a borrower (e.g., character, capacity, capital, collateral).
17.6.9-12.B Describe how credit reports and scores are determined, used, and improved.
17.6.9-12.C Compare various forms of credit and how each is used (e.g., secured and unsecured loans, installment and revolving credit, service credit).
17.6.9-12.D Analyze the use of loans to finance higher education and home purchases, how they are obtained, and options for paying them back.
17.6.9-12.E Calculate the total cost of credit given a variety of situations (e.g., making minimum payments, paying fees, using alternative financial service providers).
17.6.9-12.F Describe the consequences of failing to repay debts and sources of debt management assistance.

17.6.9-12.G Evaluate various rights and laws related to credit and their impact on consumers.

Identified Eligible Content Addressed in the Unit:

Know (Concepts):	Do (Competencies):
Factors to consider when making spending decisions.	Identify and list factors to consider when making spending decisions
Methods to lower the price paid for goods and services.	Identify and list methods to lower the price paid for goods and services
Methods for tracking income and spending.	Identify and list methods for tracking income and spending
Budgeting approaches: 50-30-20 rule, Zero-based budgeting	Identify and list various budgeting approaches
Components of a personal budget.	Identify and apply the list of components to create a personal budget
Methods for adjusting a budget.	Identify and list methods for adjusting a budget
Common payment methods.	Identify and list common payment methods
Approaches to paying bills.	Identify and list various approaches to paying bills
Housing options: Renting, Buying (Homeownership)	Identify and list housing options: renting and buying
Vehicle acquisition options: Purchase (New or Used), Lease	Identify and list vehicle acquisition options
Types of taxes: Sales tax, Excise tax, Property tax	Identify and list types of taxes: sales, excise, and property taxes
Participation in charitable events or campaigns.	Analyze the role charitable giving plays in personal budgets and communities.
Pathways to Obtaining Credit.	Identify and list pathways to obtaining credit.
Use of Loans for Higher Education and Home Purchases.	Understand the specific uses of student loans and mortgage loans. Recognize the importance of responsible borrowing and repayment planning.
Total Cost of Credit Calculation.	Understand the methodology for calculating the total cost of credit in various borrowing situations. Recognize the impact of interest rates, fees, and repayment terms on the total amount paid for borrowing.
Recognize the seriousness of failing to repay debts and the long-term consequences it can have on financial stability	Incorporate credit costs into budget planning.
Know basic rights and laws related to credit.	Assess the impact of credit-related laws on consumer rights and financial well-being. Understand the legal protections available in credit transactions and how to assert

Unit Key vocabulary	budget, credit, APR, FCRA, ECOA, TILA, CCPA, loan, interest, collateral, equity, utilities, service fee, discretionary expense, fixed expense, variable expense, comparison shopping, discount, emergency fund, debit card, cash, checks, mobile wallet, rent, lease, mortgage,

Sample Unit Activating Strategy	*-Brainstorm a list of all the bills that a typical household might have to pay in a month.* *-Shop 'til you Drop! Go online to find an apartment. Then put together a sample grocery order. How much does it cost to fill your gas tank? Let's get a sense of prices in our local community!*

	Lesson 1	**Lesson 2**	**Lesson 3**
Duration	2 days	3 days	3 days
Lesson Essential Question(s)	What spending is necessary for living independently?	How does planning and prioritizing spending goals help with budgeting?	How do people adjust budgets based on changing circumstances?
Key Lesson Vocabulary	rent, mortgage, budget, fixed expenses, variable expenses, utilities	priority, income, discretionary expense	comparison shopping, emergency fund, credit, discount
Assessment	Budget Project	Budget Project	Budget Project SmartFutures#15

	Lesson 4	Lesson 5	Lesson 6
Duration	3 days	3 days	
Lesson Essential Question(s)	How can credit be used as part of a responsible spending plan?	What legal protections help consumers use credit responsibly?	
Key Lesson Vocabulary	collateral, equity, service fee	APR, FCRA, ECOA, TILA, CCPA,	
Assessment	Credit Comparison Project	Legal Protections Quiz	

Authentic, Varied, and Frequent Assessment Types
Common Pre-Assessment (If applicable):
Common Summative Assessment:
Budget Project Credit Comparison Project Legal Protections Quiz
Unit Success Criteria:
Complete all projects with at least a 75%. Complete Smart Futures #15: Personal Budget

Resources
NEFE Booklets & Activities SmartFutures Software *Personal Finance* by Guy Buker, Jerrie Muir & Erin Thomas (Hard Copy or online version) Calculator iPads and/or Desktop Computers

Scaffolds and Enrichment		
Struggling Learners	**Multilingual Learners**	**Advanced Learners**
PDF Text (ReadAloud via iPad) Links to Resources in Schoology	PDF Text (Translation via Google Translate) Links to Resources in Schoology	Enrichment Activities to Extend Content

Financial Literacy & Career Exploration DASD Unit Map
Unit 4: Saving & Investing

Subject:	Financial Literacy & Career Exploration	**Grade Level:**	10th	**Duration:**	90 days

Key Learnings	*-Saving & investing are essential to reaching long-term financial goals.* *-Saving & investing provides financial flexibility in a changing economy.*

Unit Essential Question:	How can saving and investing help people reach their financial goals?

Identified Standards Addressed in the Unit:
17.4.9-12.A Calculate a person's net worth given their assets and liabilities.
17.4.9-12.B Develop a savings plan for accomplishing personal short- and long-term financial goals.
17.4.9-12.C Compare the features of various savings vehicles (e.g., savings accounts, certificates of deposit, money market accounts) and the interest rates offered by several institutions.
17.4.9-12.D Explain factors that contribute to rates of return for various investments, including risk, inflation, and taxes.
17.4.9-12.E Explain the similarities and differences between stocks, bonds, mutual funds, and exchange-traded funds, and the factors that influence price fluctuations for each.
17.4.9-12.F Describe factors to consider when selecting sources of investment advice and trading methods (e.g., online trading platforms, financial advisors, robo-advisors).
17.4.9-12.G Explain how popular benchmark indices are used.
17.4.9-12.H Recommend an investment portfolio diversified to meet specific goals, including purpose, starting age, time horizon, and tolerance for risk.
17.4.9-12.I Compare retirement-specific investment options, including employer-sponsored plans, Roth and traditional individual retirement accounts, and accounts available to people who are self-employed.
17.4.9-12.J Analyze personal attitudes towards risk and how these might impact future investment decisions and outcomes.
17.4.9-12.K Describe methods to avoid or counteract the potentially negative impacts of behavioral biases on investment decisions.

Identified Eligible Content Addressed in the Unit:

Know (Concepts):	**Do (Competencies):**
Components of net worth: assets, liabilities, equity	Identify and list components of net worth: assets, liabilities, equity

Methods of saving for a long-term financial goal.	Build a plan for reaching a long-term financial goal.
Types of savings vehicles: Savings accounts, Certificates of deposit (CDs), Money market accounts	Identify and list types of savings vehicles: savings accounts, CDs, money market accounts
Factors affecting rates of return: Risk, Inflation, Taxes	Identify and list factors contributing to rates of return: risk, inflation, taxes
Investment vehicles:Stocks, Bonds, Mutual funds, Exchange-traded funds (ETFs)	Identify and list types of investment vehicles: stocks, bonds, mutual funds, ETFs
Sources of investment advice and trading methods: Financial advisors, Online trading platforms, Robo-advisors	Identify and list sources of investment advice and trading methods: financial advisors, online trading platforms, robo-advisors
Popular benchmark indices: S&P 500, Dow Jones Industrial Average (DJIA), Nasdaq Composite	Identify and list popular benchmark indices: S&P 500, Dow Jones Industrial Average (DJIA), Nasdaq Composite
Investment portfolio components: Stocks, Bonds, Mutual funds, Exchange-traded funds (ETFs), Real estate investment trusts (REITs), Cash equivalents	Identify and list investment portfolio components: stocks, bonds, mutual funds, ETFs, REITs, cash equivalents
Retirement-specific investment options: Employer-sponsored plans, Roth and traditional IRAs, Retirement accounts for self-employed individuals	Identify and list retirement-specific investment options: employer-sponsored plans, Roth and traditional IRAs, retirement accounts for self-employed individuals
Personal attitudes towards risk: Risk tolerance, Risk aversion, Risk perception	Identify and list personal attitudes towards risk: risk tolerance, risk aversion, risk perception
Behavioral biases in investment decisions: Confirmation bias, Overconfidence, Loss aversion, Anchoring, Herding, Mental accounting	Identify and list behavioral biases in investment decisions: confirmation bias, overconfidence, loss aversion, anchoring, herding, mental accounting

Unit Key vocabulary	asset, liability, equity, CD, money market, stocks, bonds, mutual funds, ETFs, DJIA, NASDAQ, REITs, risk tolerance, IRA, Roth, 401K, confirmation bias, savings account, portfolio, diversification, dividends, broker, FDIC, cryptocurrency

Sample Unit Activating Strategy	*-Choose a stock (Google, Apple, Disney, etc) and see what it cost 10 years ago, 5 years ago, and today. If you'd bought 100 shares 10 years ago, what would it be worth now?* *-Use an online interest calculator. If you'd gotten $100 the year you were born, and saved it, how much would it be worth today at various interest rates?*

	Lesson 1	**Lesson 2**	**Lesson 3**

Duration	2 days	3 days	3 days
Lesson Essential Question(s)	Why are savings important to financial planning?	What are the advantages and disadvantages of different saving and investing tools?	How do people determine which saving and investing tools are best for their financial goals?
Key Lesson Vocabulary	asset, liability, equity	CD, money market, stocks, bonds, mutual funds, ETFs, DJIA, NASDAQ, REITs, risk tolerance, IRA, Roth, 401K, FDIC, cryptocurrency	diversification, portfolio
Assessment	Savings Plan Project	Savings & Investing Tools Quiz	Savings Plan Project

	Lesson 4	**Lesson 5**	**Lesson 6**
Duration	3 days	3 days	
Lesson Essential Question(s)	How should savings plans for a car, college, or a house differ?	What are some ways to build retirement savings?	
Key Lesson Vocabulary	interest rate, time horizon	time value of money, pension, annuity, 401K	
Assessment	Savings Plan Project	Retirement Plan Comparison	

Authentic, Varied, and Frequent Assessment Types
Common Pre-Assessment (If applicable):
Common Summative Assessment:
Saving & Investing Tools Quiz Savings Plan Project
Unit Success Criteria:
Complete all assessments & projects with at least a 75%.

Resources
NEFE Booklets & Activities SmartFutures Software *Personal Finance* by Guy Buker, Jerrie Muir & Erin Thomas (Hard Copy or online version) Calculator iPads and/or Desktop Computers

Scaffolds and Enrichment		
Struggling Learners	**Multilingual Learners**	**Advanced Learners**
PDF Text (ReadAloud via iPad) Links to Resources in Schoology	PDF Text (Translation via Google Translate) Links to Resources in Schoology	Enrichment Activities to Extend Content

Financial Literacy & Career Exploration DASD Unit Map
Unit 5: Risk & Insurance

Subject:	Financial Literacy & Career Exploration	**Grade Level:**	10th	**Duration:**	90 days

Key Learnings	*-Insurance helps to reduce financial risk by spreading individual risk across a large group.*

Unit Essential Question:	How can insurance be used to reduce financial risk?

Identified Standards Addressed in the Unit:
17.5.9-12.A Evaluate a person's potential for financial risk (e.g., loss of personal property, reduction in income, liability).
17.5.9-12.B Critique approaches to avoiding, reducing, retaining, and transferring risk given a particular scenario.
17.5.9-12.C Formulate insurance recommendations based on individual needs, situations, and preferences, including but not limited to automotive, homeowners, renters, health, life, and disability, as justified.
17.5.9-12.D Use information from various sources to compare insurance providers, plans, and prices.
17.5.9-12.E Formulate a process of comparing insurance products, determining out-of-pocket costs, and filing clai
17.5.9-12.F Describe circumstances in which a person may be required to show proof of insurance or obtain a minimum amount of coverage.
17.5.9-12.G Evaluate the impact of public insurance programs for individuals facing financial hardship (e.g., Medicare, Medicaid, and unemployment).
17.5.9-12.H Analyze trends in financial fraud and strategies to avoid becoming a victim.
17.5.9-12.I Research the agencies individuals can contact and steps they can take to address financial fraud and scams, including identity

theft.

Identified Eligible Content Addressed in the Unit:

Know (Concepts):	Do (Competencies):
Types of financial risk: Loss of personal property, Reduction in income, Liability (e.g., legal, debt)	Identify and list types of financial risk: loss of personal property, reduction in income, liability
Risk management approaches: Avoidance, Reduction, Retention, Transfer	Identify and list risk management approaches: avoidance, reduction, retention, transfer
Types of insurance coverage.	Identify and list types of insurance coverage: automotive, homeowners, renters, health, life, disability
Sources of insurance information.	Identify and list sources of insurance information: insurance company websites, consumer reports and reviews, and comparison sites.
Steps in comparing insurance products.	Compare insurance products.
Common situations requiring proof of insurance: Vehicle registration or renewal, Obtaining a mortgage or renting property, Applying for certain jobs, Participating in certain activities or events, Starting a business	Identify and list common situations requiring proof of insurance: vehicle registration or renewal, obtaining a mortgage or renting property, applying for certain jobs, participating in certain activities or events, starting a business
Public insurance programs for individuals facing financial hardship: Medicare, Medicaid, and unemployment insurance	Identify and list public insurance programs for individuals facing financial hardship: Medicare, Medicaid, and unemployment insurance
Common types of financial fraud: Identity theft, Phishing scams, Investment fraud, Credit card fraud, Ponzi schemes	Identify and list common types of financial fraud: identity theft, phishing scams, investment fraud, credit card fraud, Ponzi schemes
Key agencies individuals can contact: Federal Trade Commission (FTC), Consumer Financial Protection Bureau (CFPB), Securities and Exchange Commission (SEC), Internet Crime Complaint Center (IC3), State Attorney General's Office	Identify and list key agencies individuals can contact to address financial fraud and scams, including the Federal Trade Commission (FTC), Consumer Financial Protection Bureau (CFPB), Securities and Exchange Commission (SEC), Internet Crime Complaint Center (IC3), and State Attorney General's Office

Unit Key vocabulary	liability, disability, insurance, mitigate, policy, Medicare, Medicaid, risk management, fraud, phishing, Ponzi schemes

Sample Unit Activating Strategy	*-What happens if you get into a car accident? How much might it cost to fix all the things that go wrong?*

	Lesson 1	**Lesson 2**	**Lesson 3**
Duration	2 days	2 days	3 days
Lesson Essential Question(s)	How does insurance work?	When and why is proof of insurance required?	When are different types of optional insurance beneficial?
Key Lesson Vocabulary	insurance, policy, liability, mitigate	risk management	fraud, mortgage, disability, Ponzi schemes, phishing
Assessment	Insurance Infographic	Scenario Quiz	Scenario Quiz

	Lesson 4	**Lesson 5**	**Lesson 6**
Duration	1 day		
Lesson Essential Question(s)	How do government insurance programs benefit the community?		
Key Lesson Vocabulary	Medicare, Medicaid		
Assessment	Your Insurance Needs Project		

Authentic, Varied, and Frequent Assessment Types
Common Pre-Assessment (If applicable):

Common Summative Assessment:

Insurance Infographic
Insurance Scenario Quizzes
Your Insurance Needs Project

Unit Success Criteria:

Complete all assessments & projects with at least a 75%.

Resources
NEFE Booklets & Activities
SmartFutures Software
Personal Finance by Guy Buker, Jerrie Muir & Erin Thomas (Hard Copy or online version)
Calculator
iPads and/or Desktop Computers

Scaffolds and Enrichment		
Struggling Learners	**Multilingual Learners**	**Advanced Learners**
PDF Text (ReadAloud via iPad) Links to Resources in Schoology	PDF Text (Translation via Google Translate) Links to Resources in Schoology	Enrichment Activities to Extend Content

Financial Literacy & Career Exploration DASD Unit Map
Unit 6: Career Awareness & Preparation

Subject:	Financial Literacy & Career Exploration	**Grade Level:**	10th	**Duration:**	90 days

Key Learnings	*Students will determine where their career interests lie and develop a plan to prepare for that career during their remaining time in high school.*

Unit Essential Question:	What do you want to do when you grow up? What can you do during the next few years to prepare for that career?

Identified Standards Addressed in the Unit:
13.1.11. A. Relate careers to individual interests, abilities, and aptitudes.
B. Analyze career options based on personal interests, abilities, aptitudes, achievements and goals

C. Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
D. Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: Career days, Career portfolio Community service, Cooperative education, Graduation/senior project, Internship, Job shadowing, Part-time employment, Registered apprenticeship, School-based enterprise
E. Justify the selection of a career.
F. Analyze the relationship between career choices and career preparation opportunities, such as, but not limited to: • Associate degree, Baccalaureate degree, Certificate/licensure, Entrepreneurship, Immediate part/full time employment, Industry training, Military training, Professional degree, Registered apprenticeship, Tech Prep, Vocational rehabilitation centers
G. Assess the implementation of the individualized career plan through the ongoing development of the career portfolio
H. Review personal high school plan against current personal career goals and select postsecondary opportunities based upon personal career interests.
13.2.11. A. Apply effective speaking and listening skills used in a job interview.
B. Apply research skills in searching for a job. MKTG 305 Research career and educational opportunities in marketing or business.
C. Develop and assemble, for career portfolio placement, career acquisition documents, such as, but not limited to: • Job application, Letter of appreciation following an interview, Letter of introduction, Postsecondary education/training applications, Request for letter of recommendation, Resume MKTG 301 Prepare a resume for a specific job in marketing or business. MKTG 302 Prepare a cover letter for a specific job in the field of marketing or business. MKTG 303 Complete a job application for a specific job in the field or marketing or business. MKTG 304 Prepare for a job interview in the field of marketing or business. ADMIN 301 Utilize templates to prepare documents. ADMIN 308 Create, edit, and format documents.
D. Analyze, revise, and apply an individualized career portfolio to chosen career path.

E. Demonstrate, in the career acquisition process, the application of essential workplace skills/knowledge.
MKTG 307 Participate in a job interview.
ADMIN 802 Apply electronics and phone communications etiquette.
ADMIN 803 Use scheduling and contact management software.

Identified Eligible Content Addressed in the Unit:

Know (Concepts):	Do (Competencies):
Careers: Various occupations, professions, and fields of work available to individuals.	Relate personal interests, abilities, and aptitudes to potential career options. Explore different occupations and fields of work to identify suitable career paths based on individual strengths and preferences.
Various factors influence career decisions, including personal interests, abilities, aptitudes, achievements, and goals.	Analyze personal interests, abilities, aptitudes, achievements, and goals to evaluate and select appropriate career options. Research and explore various careers to find alignment with individual strengths, preferences, and aspirations.
The workplace is constantly evolving due to technological advancements, globalization, and changing societal needs.	Analyze the changing roles of individuals in the workplace to identify new opportunities within career choices. Explore how emerging technologies, market trends, and evolving job demands open doors to diverse career possibilities. Adapt to changing workplace dynamics by acquiring relevant skills and knowledge to capitalize on new career opportunities.
School-based opportunities for career awareness/preparation encompass various activities and programs designed to introduce students to different career paths and develop essential career-related skills.	Engage in school-based opportunities for career awareness/preparation, such as career fairs, job shadowing, internships, and career exploration workshops. Take advantage of the resources and support provided by schools to explore different career options, develop essential skills, and plan for future career pathways.
Justifying the selection of a career involves identifying and evaluating factors that influence career decisions, including personal interests, values, skills, aptitudes, and future goals.	Justify the selection of a career by assessing personal interests, values, skills, aptitudes, and future goals. Consider how each factor contributes to a fulfilling and rewarding career path. Make informed decisions that align with individual strengths, passions, and aspirations, while also considering potential career growth and opportunities for advancement.
Career preparation opportunities encompass various activities and programs designed to equip individuals with the skills, knowledge, and experiences necessary for successful career development.	Analyze the relationship between career choices and available career preparation opportunities. Evaluate how different career paths align with potential career preparation activities, such as internships, apprenticeships, educational programs, and skill development

	workshops. Make informed decisions about pursuing career preparation opportunities that best match individual career goals, interests, and aspirations.
An individualized career plan outlines a person's career goals, aspirations, and steps for achieving them, while a career portfolio is a collection of documents and artifacts showcasing one's skills, accomplishments, and experiences related to their career development.	Assess the implementation of your individualized career plan by regularly updating and expanding your career portfolio. Reflect on your career goals, achievements, and experiences to ensure they align with your long-term aspirations. Use feedback from mentors, educators, and industry professionals to refine and enhance your career portfolio and career plan as needed.
A personal high school plan is a structured roadmap outlining a student's academic goals, coursework, extracurricular activities, and career aspirations during their high school years. Reviewing this plan involves assessing its alignment with current personal career goals. Postsecondary opportunities refer to various options for continuing education or training after high school, such as colleges, universities, technical schools, apprenticeships, or workforce training programs.	Review your personal high school plan to ensure it aligns with your current career goals and aspirations. Consider your interests, skills, and desired career path when selecting postsecondary opportunities. Explore different options, such as colleges, universities, technical schools, apprenticeships, or workforce training programs, that best match your career interests and goals. Make informed decisions about your postsecondary education or training based on your personal career interests and objectives.
- The structure of a job interview (e.g., introduction, body, conclusion).	- Practice and demonstrate effective speaking skills:
- Different methods for job searching (e.g., online job boards, networking, company websites, job fairs). - Key components of a job listing (e.g., job title, responsibilities, qualifications, application instructions). - Various sources of job market information (e.g., industry reports, labor statistics, company profiles).	- Identify and utilize various job search methods: - Use online job boards to find relevant job listings. - Attend job fairs and networking events to discover opportunities.
- The types of career acquisition documents (e.g., resume, cover letter, references, thank-you notes). - The essential components of a resume (e.g., contact information, summary, work experience, education, skills). - How to format and organize career acquisition documents professionally.	- Create a professional resume that highlights relevant skills, experiences, and accomplishments - Write a tailored cover letter that addresses the specific job and company, explaining why you are a suitable candidate. - Draft a thank-you note to send after an interview, expressing appreciation and reiterating interest in the position.
- The components of a career portfolio (e.g., resume, cover letter, references, certifications, work samples). - Criteria for evaluating the effectiveness of career portfolio documents.	- Regularly review and update the resume to reflect new skills, experiences, and accomplishments relevant to the chosen career path. - Revise the cover letter to ensure it is tailored to specific job applications and reflects current career goals.
- Essential workplace skills (e.g., communication, teamwork, problem-solving, time management, adaptability).	- Demonstrate effective communication skills in resumes, cover letters, and interviews.

- Basic workplace knowledge (e.g., organizational structures, common industry practices, workplace etiquette).	- Showcase teamwork and collaboration skills through examples in application materials and during interviews.

Unit Key vocabulary	resume, cover letter, job search, apprenticeship, postsecondary, interview, career, aptitude, career cluster

Sample Unit Activating Strategy	*Asks students to consider what they wanted to do in 1st grade and how that compares to now. What changed? How has their thinking about careers changed as they've gotten older?*

	Lesson 1	**Lesson 2**	**Lesson 3**
Duration	2 days	3 days	3 days
Lesson Essential Question(s)	What careers interest you?	How can you prepare for your chosen field?	How do you tailor a resume to your desired job?
Key Lesson Vocabulary	aptitude, interests, career cluster	apprenticeship, postsecondary	resume, cover letter
Assessment	Smart Futures #6 Personal Interests Smart Futures #7 Career Clusters	Career Research Project	Resume Project

	Lesson 4	**Lesson 5**	**Lesson 6**
Duration	3 days	2 days	
Lesson Essential Question(s)	How can you put your best self forward in an interview?	How do you find a job?	

Key Lesson Vocabulary	interviews		cover letter, job search		
Assessment	Smart Futures #12 Interviews		Job Search & Cover Letter Project		

Authentic, Varied, and Frequent Assessment Types
Common Pre-Assessment (If applicable):
Common Summative Assessment:
Complete Smart Futures 6, 7, and 12. Complete Career Research Project. Complete Resume Project. Complete Job Search & Cover Letter Project.
Unit Success Criteria:
Complete all assessments & projects with at least a 75%. Successfully complete Smart Futures 6, 7, and 12.

Resources
NEFE Booklets & Activities SmartFutures Software *Personal Finance* by Guy Buker, Jerrie Muir & Erin Thomas (Hard Copy or online version) Calculator iPads and/or Desktop Computers

Scaffolds and Enrichment		
Struggling Learners	**Multilingual Learners**	**Advanced Learners**
PDF Text (ReadAloud via iPad) Links to Resources in Schoology	PDF Text (Translation via Google Translate) Links to Resources in Schoology	Enrichment Activities to Extend Content

Financial Literacy & Career Exploration DASD Unit Map
Unit 7: Career Retention & Entrepreneurship

Subject:	Financial Literacy & Career Exploration	**Grade Level:**	10th	**Duration:**	90 days

Key Learnings	*Good work habits are essential for job retention and advancement. Even in a large company, entrepreneurship is a desirable trait.*

Unit Essential Question:	How can we develop the skills we need to be successful in the workplace?

Identified Standards Addressed in the Unit:
13.3.11.A. Evaluate personal attitudes and work habits that support career retention and advancement. ADMIN 905 Use interpersonal communication skills in a diverse work environment.
B. Evaluate team member roles to describe and illustrate active listening techniques: • Clarifying • Encouraging • Reflecting • Restating • Summariizing
C. Evaluate conflict resolution skills as they relate to the workplace: • Constructive criticism • Group dynamics • Managing/leadership • Mediation • Negotiation • Problem solving
D. Develop a personal budget based on career choice, such as, but not limited to: • Charitable contributions • Fixed/variable expenses • Gross pay • Net pay • Other income • Savings • Taxes
E. Evaluate time management strategies and their application to both personal and work situations.
F. Evaluate strategies for career retention and advancement in response to the changing global workplace.
G. Evaluate the impact of lifelong learning on career retention and advancement.
A. Analyze entrepreneurship as it relates to personal career goals and corporate opportunities.
B. Analyze entrepreneurship as it relates to personal character

traits.

Identified Eligible Content Addressed in the Unit:

Know (Concepts):	Do (Competencies):
- Key personal attitudes that support career success (e.g., positivity, resilience, motivation). - Essential work habits for career retention and advancement (e.g., punctuality, reliability, continuous learning, professionalism). - The role of work-life balance in maintaining job performance and satisfaction. - Techniques for effective communication and teamwork in the workplace.	- Self-assess to identify personal attitudes and work habits that impact career performance. - Set personal goals to improve attitudes and work habits that need development. - Practice effective time management and organizational skills to enhance productivity. - Develop and demonstrate effective communication skills in various workplace scenarios.
- Different team member roles and their responsibilities (e.g., leader, facilitator, recorder, contributor). - The impact of non-verbal communication on active listening (e.g., eye contact, body language, nodding). - Techniques for providing constructive feedback and encouraging open communication.	- Identify and describe various team member roles and their specific responsibilities within a team. - Address and mitigate barriers to active listening in team interactions. - Apply active listening techniques such as paraphrasing, summarizing, and asking clarifying questions during team discussions.
- Key conflict resolution skills (e.g., active listening, empathy, problem-solving, negotiation, assertiveness). - Common causes of workplace conflicts (e.g., miscommunication, differing values, competition for resources). - Techniques for mediating conflicts (e.g., finding common ground, focusing on interests rather than positions, seeking win-win solutions). - The role of effective communication in preventing and resolving conflicts.	- Identify and describe various conflict resolution skills and their importance in the workplace. - Apply active listening and empathy when addressing conflicts to understand all perspectives involved. - Use problem-solving techniques to identify the root cause of conflicts and generate mutually acceptable solutions. - Implement negotiation strategies to reach fair and balanced agreements in conflict situations.

- Common time management strategies (e.g., prioritization, goal setting, scheduling, delegation, procrastination management). - Techniques for setting SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals. - Methods for creating and maintaining schedules (e.g., daily planners, digital calendars, time-blocking). - The importance of time management in achieving work-life balance.	- Identify personal and work-related tasks and prioritize them based on urgency and importance. - Set SMART goals for both personal and work-related tasks to ensure clarity and focus in time management efforts. - Use a daily planner or digital calendar to schedule tasks and allocate specific time slots for completing them. - Allocate time for personal activities and self-care to maintain a healthy work-life balance, ensuring time is not solely focused on work-related tasks.
- Strategies for career retention (e.g., ongoing learning, networking, performance improvement, adaptability). - Techniques for staying relevant and competitive in a changing global marketplace (e.g., acquiring new skills, staying updated on industry trends, expanding professional network). - Importance of networking and building professional relationships for career growth.	- Identify and research strategies for career retention and advancement in response to global workplace changes. - Engage in continuous learning and skill development to stay abreast of industry trends and emerging technologies. - Actively participate in professional networking events, conferences, and online communities to expand professional network and opportunities.
- Concepts and benefits of lifelong learning (e.g., acquiring new skills, staying updated on industry trends, personal and professional growth). - Strategies for integrating lifelong learning into career development plans. - The impact of continuous learning on job satisfaction, employability, and career advancement opportunities.	- Research and gather information about the importance and benefits of lifelong learning for career retention and advancement. - Develop a personalized learning plan that aligns with career goals and aspirations, outlining specific skills and knowledge to acquire through lifelong learning activities. - Actively participate in lifelong learning activities to improve job performance, expand professional networks, and increase opportunities for career advancement.
- Types of entrepreneurial ventures (e.g., startups, small businesses, social enterprises, franchises). - The role of entrepreneurship in driving innovation and economic	- Explore different types of entrepreneurial ventures and identify their potential alignment with personal career goals and corporate opportunities.

growth.	- Analyze case studies and examples of successful entrepreneurial ventures to understand their impact on innovation and economic development.
- Concepts and characteristics of entrepreneurship (e.g., innovation, risk-taking, opportunity recognition, business ownership).	- Research and understand the principles and traits associated with entrepreneurship, including risk-taking, creativity, and adaptability.

Unit Key vocabulary	work habits, time management, entrepreneurship, lifelong learning, networking, conflict resolution

Sample Unit Activating Strategy	*Present a variety of workplace scenarios and invite students to determine how they would respond.*

	Lesson 1	**Lesson 2**	**Lesson 3**
Duration	3 days	3 days	3 days
Lesson Essential Question(s)	What is entrepreneurship, and why does it matter for all jobs?	What are the components of good work ethic?	How can we productively resolve conflict in the workplace?
Key Lesson Vocabulary	entrepreneurship	work ethic, reliable, responsible, lifelong learning	collaboration, conflict resolution, partnership
Assessment	Smart Futures #14	Work Ethic Project	Case Study Analysis

	Lesson 4	**Lesson 5**	**Lesson 6**
Duration	3 days	3 days	

Lesson Essential Question(s)	What is the role of networking in job retention and acquisition?		How does social media help job search?		
Key Lesson Vocabulary	networking		LinkenIn, Social Media		
Assessment	Networking Role Playing		Creating a Professional Profile Project		

Authentic, Varied, and Frequent Assessment Types
Common Pre-Assessment (If applicable):
Common Summative Assessment:
Work Ethic Project Networking Role Playing Project Creating a Professional Profile Project Smart Futures #14 Entrepreneurship
Unit Success Criteria:
Complete all assessments & projects with at least a 75%.

Resources
NEFE Booklets & Activities SmartFutures Software *Personal Finance* by Guy Buker, Jerrie Muir & Erin Thomas (Hard Copy or online version) Calculator iPads and/or Desktop Computers

Scaffolds and Enrichment		
Struggling Learners	**Multilingual Learners**	**Advanced Learners**

PDF Text (ReadAloud via iPad) Links to Resources in Schoology	PDF Text (Translation via Google Translate) Links to Resources in Schoology	Enrichment Activities to Extend Content

Cover Sheet

Dover Area School District
Curriculum Cover Sheet

CIP Code: 01.0601

CIP Title: Applied Horticulture/Horticultural Operations, General

Planned Hours: 980

CIP Description:

A program that focuses on the general production and processing of domesticated plants, shrubs, flowers, foliage, trees, groundcovers, and related plant materials; the management of technical and business operations connected with horticulture services; and the basic scientific principles needed to understand plants and their management and care. Landscaping basics are also included.

Component Courses:

859 - Honors Agriscience (120 hours) Ⓢ

Honors Agriscience focuses on a variety of agricultural topics using advancing technology. The class will cover the historical relevance of agriculture, natural resource management and an introduction to the National FFA Organization, a student leadership organization. Additional topics will include animal and plant science systems as well as measuring skills and a study of emerging technology resources. In addition to the curriculum for Agriscience, students will devote a greater degree of time to completing laboratory experiments, critical thinking about scientific concepts, and communicating experimental findings. This course is intended for students who have a strong interest in science and wish to pursue a career in the agricultural sciences or another scientific research-related career field.

860 - Agriscience (120 hours) Ⓢ

Agriscience focuses on a variety of agricultural topics using advancing technology. The class will cover the historical relevance of agriculture, natural resource management, and an introduction to the National FFA Organization, a student leadership organization. Additional topics will include animal and plant science systems as well as measuring skills and a study of emerging technology resources. This course is designed to help students discover their interests as they relate to agricultural courses as well as developing scientific skills and procedures.

Dover Area School District
Curriculum Cover Sheet

870- Plant Science/Botany (120 hours) Ⓢ

This laboratory-intensive course provides a comprehensive introduction to botany and plant physiology, satisfying a high school Science graduation requirement. The curriculum focuses on plant taxonomy, cellular structure, anatomy, and the physiological processes of growth and development, including photosynthesis, respiration, and transpiration. Students will bridge the gap between scientific theory and practical application through extensive fieldwork in the school greenhouse, where they will manage plant life cycles, analyze soil composition, and experiment with environmental controls. This course is highly recommended for students interested in post-secondary studies in biology, environmental science, horticulture, or agronomy.

874 - Agricultural Business & Marketing (120 hours)

This course includes an extensive study of agricultural and small-business financial principles, including marketing, agricultural business structure, advanced recordkeeping, computer-based business analysis, and basic taxes. Career development, including workplace skills, will be discussed. Students completing the Agriculture General, Applied Horticulture, and Agriculture Mechanization Programs would benefit from this course.

876 - Horticulture II (120 hours)

REQUIRED: Successful Completion of Plant Science/Botany and Horticulture & Greenhouse Operations

This course is an extension of horticulture topics covered in Horticulture & Greenhouse Operations. Specific topics include advances in plant propagation, hydroponics, and advanced lab experiments. Turfgrass care will be included. Research labs utilizing the scientific method of investigation in horticulture will be required.

878 - Landscape Design & Maintenance (120 hours)

Students will focus on major principles of landscape design necessary to develop a layout for a home landscape project. Emphasis will include site selection, plant and tree identification, hardscaping materials, project planning, and cost analysis.

887 - Natural Resources Management (120 hours) Ⓢ

This course will prepare students for careers bridging human and environmental systems. We will discuss sustainability, energy sources, wildlife, conservation methods, and more. In a combination of classroom and hands-on learning, students will gain the knowledge needed to manage human interactions with the natural world in parks and protected areas. Those

interested in careers involving wildlife, fish and game, research, environmental science and more will benefit from this course.

888 - Construction (120 hours)

Prerequisite: Successful Completion or Concurrent Scheduling of Agricultural Mechanics I

In this course, students will learn about building layout, planning, and framing, along with practical theories of electricity, with emphasis on proper wiring techniques. Students will complete a series of labs focused on circuits commonly found in the home, including receptacles and switches. Students will learn to read and produce building plans. Shop work will include a required project and or a major agriculture building construction project. A masonry project will be included. Students will learn basic land surveying.

890 - Supervised Agricultural Experience (120 hours)

REQUIRED: TEACHER MUST APPROVE

In this course, agricultural students will receive detailed help with the initial development and implementation of their Supervised Agricultural Experience project or SAE. Coursework will include an emphasis on project development and record-keeping skills. Students will use the Agriculture Experience Tracker (AET), an online program, to record data about the time and money they devote to their project.

891 - Agricultural Work Experience (120 hours) (Fall)

892 - Agricultural Work Experience (120 hours) (Fall)

893 - Agricultural Work Experience (120 hours) (Spring)

894 - Agricultural Work Experience (120 hours) (Spring)

MUST ALSO BE ENROLLED IN 874 (AG BUSINESS & MARKETING)

Seniors who meet the prescribed requirements are given the opportunity to obtain on-the-job vocational work experience. All students who elect this course must be on the path to being an AG General Program completer. Students will be permitted to leave school one or two periods per day in order to report to their job.

Agricultural Work Experience is designed to provide senior students with an in-depth "real world" career experience. This program, approved for credit by the Pennsylvania Department of Education, connects school-based classroom/laboratory instruction with career and technical knowledge learned on a work site. It provides students with on-the-job training that is directly related to their future career objectives. The Capstone Seminar experience is often viewed as

the completing element of secondary career and technical educational experience. It provides a valuable connection when the student graduates and continues with post-secondary education or enters directly into the workforce. The paid employment shall be within careers related to students' Ag-General Program of Study and vocational plan, or a combination thereof. This class is only for the CTE Ag-General program of study completers. Students must be accepted to become a program of study completer to schedule this class. Students must be at least 16 years of age and must accept full responsibility for transportation to/from the workplace. The district and its agents are not liable for transportation and any related injury or loss.

895 - Intro to Ornamental Horticulture & Greenhouse Operations (CHS) (120 hours)

REQUIRED: Successful Completion of Plant Science/Botany

This course combines the ***Introduction to Ornamental Horticulture (CHS)*** class offered in partnership with Penn College with additional hands-on work in the greenhouse. College credit is free for this course. Students will learn about the diverse ornamental horticulture industry, including the worldwide scope and economic impact of the industry in today's marketplace. Emphasis on information access through the Internet, trade journals, trade organizations, the horticulture industry, guest speakers, and visitations to various horticultural businesses. Exploration includes products, services, and information used in the industry; production and marketing (wholesale and retail) of horticultural products and services; and traditional and non-traditional career paths within the industry. Through a combination of classroom instruction and laboratory experience, students will master the techniques of sexual and asexual propagation, soil and media composition, and plant nutrition. Students will learn to operate greenhouse environmental systems, including irrigation, lighting, and temperature controls. The course strictly adheres to industry safety standards and offers training in chemical handling and Integrated Pest Management (IPM). Students will also develop a business plan for a retail crop cycle, covering cost analysis, marketing strategies, and customer service.

Pacing Guide

PACING GUIDE

***859* / 860 - *Honors* Agriscience (120 hours)**	**Associated Tasks**	**120 Hours**
Circles of Ag Education	N/A	15 hours
Communication	N/A	15 hours
Science of Agriculture	101, 103, 105, 302, & 501	15 hours
Natural Resources	101, 103, 105, & 501	25 hours
Plants and Animals	103, 302, 303, 305, 501, 502, & 902	35 hours
Ag Power and Technology	101, 103, 105, & 501	10 hours
Agriculture in the Future	N/A	5 hours
Honors Component Description *Students in the Honors Class will complete at least two additional projects, labs, and/or lab reports per unit to enrich their experience with the associated tasks.*		

870- Plant Science/Botany	**Associated Tasks**	**120 Hours**
Plant Naming, Classification, & Use	201, 213, & 901	7 hours
Plant Anatomy	203 & 204	15 hours
Growth & Development	206, 207, 211, & 214	15 hours
Photosynthesis & Cellular Respiration	205	15 hours
Soil & Plant Nutrients	206, 301, 302, 303, 304, 305, 306, 307, & 308	15 hours
Plant Pathogens	209, 210	10 hours
IPM	209, 210	20 hours
Plant Reproduction	208, 214	11 hours
Biotechnology	212, 801, 802, & 803	12 hours

PACING GUIDE

874 - Agricultural Business & Marketing	**Associated Tasks**	**120 Hours**
Business Start-Up	407, 409, & 804	15 hours
Managing Finances	404 & 409	25 hours
Managing Risk	404 & 409	30 hours
Business Planning	409	20 hours
Marketing	409	20 hours
NOCTI Preparation and Completion	All Listed Above	10 hours

876 - Horticulture II	**Associated Tasks**	**120 Hours**
Plant Identification-Common & Scientific	904	7 hours
OSHA 30 Training	101, 102, 103, & 105	31 hours
Pesticide Applicator Certification	101, 102, 103, 104, 105, 201, 206, & 209	15 hours
Plant Growth Requirements	309, 310, 311, & 512	20 hours
Fertilization Calculations & Application	203 & 310	12 hours
Greenhouse Management Techniques	512, 1107 & 1110	5 hours
Plant Sale Business & Marketing Plans	403, 404, & 406	15 hours
NOCTI Preparation and Completion	All Listed Above	15 hours

PACING GUIDE

878 - Landscape Design & Maintenance	**Associated Tasks**	**120 Hours**
Introduction to Horticulture & Career Development	804, 1001, 1002, 1003 & 1004	5 hours
Plant Health Care & Safety	101, 102, 103, 201, 202, 205, & 305	10 hours
Soils, Fertility, & Turfgrass Management	501, 502, 503, 507, 508, & 1107	10 hours
Irrigation & Water Management	305, 1101, & 1102	10 hours
Site Analysis, Mapping, & Landscape Drafting	1103 & 1104	15 hours
Landscape Design Principles & Architectural Features	1101 & 1102	15 hours
Plant Identification & IPM	205, 206, 309, & 904	10 hours
Sustainable Landscaping & Environmental Stewardship	512, 601, 602, & 603	10 hours
Client Relations, Business Operations, & Professional Communication	403, 404, 406, 407, & 801	10 hours
Urban Landscapes & Emerging Technologies	104, 601, 602, 603, 701, & 704	10 hours
Capstone Project	All Listed Above	15 hours

887 - Natural Resources Management	**Associated Tasks**	**120 Hours**
Sustainability	701, 708, 710	15 hours
Biodiversity & Extinction	707, 711	15 hours
Habitats	704, 705, 707	15 hours
Invasive Species	704 & 706	15 hours
Pollution	703 & 707	15 hours
Renewable & Nonrenewable Energy	702 & 709	15 hours
Wildlife Management	704 & 705	15 hours

PACING GUIDE

Climate Change	704, 707 & 709	15 hours

888 - Construction	**Associated Tasks**	**120 Hours**
Zoning and Permitting	407	8 hours
General Industry Safety	103 & 105	7 hours
Construction Codes & Engineering Principles	105 & 407	10 hours
Framing	105	15 hours
Concrete	103 & 105	15 hours
Electrical	105	15 hours
Plumbing	103 & 105	15 hours
Heavy Machine Operation	104 & 105	10 hours
Authentic Construction Build	103, 105, & 407	25 hours

895 - Intro to Ornamental Horticulture & Greenhouse Operations (CHS)	**Associated Tasks**	**120 Hours**
Introduction to Greenhouse Industry & Career Development	804, 1001, 1002, 1003 & 1004	10 hours
Greenhouse Safety & Equipment Operation	101, 102, 103, 104, & 105	10 hours
Greenhouse Structures & Environmental Controls	304, 305, 307, & 310	14 hours
Growing Media, Soils, & Fertility Management	501, 502, 503, 505, & 507	12 hours
Plant Propagation Techniques	306, 701 & 704	18 hours
Irrigation Systems & Water Management	305, 1101, & 1102	12 hours
Greenhouse Crop Production & Scheduling	305, 311, 902, & 1108	16 hours
Integrated Pest Management	205 & 206	10 hours

PACING GUIDE

Sustainable Greenhouse Practices & Emerging Technologies	512, 601, 602, & 603	8 hours
Greenhouse Management & Marketing	203, 403, 404, 406, 407, & 409	10 hours

Task List (Update from KUD Sheet)

Competency Task List

Applied Horticulture/Horticultural Operations, General CIP 01.0601

High School Graduation Years 2022, 2023, 2024, 2025, 2026

100 Safety

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
101	Follow all general safety, laboratory safety and field-site safety practices and procedures in horticulture.	Agriscience Botany/Plant Science	Students will know: the basics of first aid, how to read SDS's, and properly and safely use the horticulture equipment	Students will understand: Safe work practices reduce the risk of injury, illness, and property damage in horticultural settings, safety procedures must be followed consistently in laboratories, greenhouses, landscapes, and field sites, & personal responsibility and awareness are essential components of maintaining a safe work environment.	Students will be able to: demonstrate all laboratory safety, general safety, and field-site safety practices & procedures, write new SDS's for horticulture products, and perform basic first aid	Quiz and Practical Application
102	Follow all OSHA safety standards for the horticulture services industry.	Horticulture II	Students will know: the basics of first aid, how to read SDS's, and properly and safely use the horticulture equipment	Students will understand: OSHA standards are designed to protect workers from workplace hazards and injuries, employers and employees share responsibility for maintaining a safe and healthy work environment, & compliance with OSHA regulations promotes	Students will be able to: demonstrate all laboratory safety, general safety, and field-site safety practices & procedures, write new SDS's for horticulture products, and perform basic first aid	Quiz and Practical Application

				professionalism and reduces workplace accidents and liability.		
103	Follow procedures written in the Safety Data Sheet (SDS) information system.	Botany/Plant Science Construction Intro to Ornamentals & Greenhouse Mgmt	Students will know: the basics of first aid, how to read SDS's, and properly and safely use the horticulture equipment	Students will understand: SDS's provide critical information about the safe handling, storage, and disposal of chemicals, understanding SDS information helps prevent chemical-related injuries and environmental contamination, & following SDS procedures ensures compliance with workplace safety regulations and industry standards.	Students will be able to: demonstrate all laboratory safety, general safety, and field-site safety practices & procedures, write new SDS's for horticulture products, and perform basic first aid	Quiz and Practical Application
104	Operate horticulture equipment.	Landscape Design & Maintenance Construction	Students will know: how to properly and safely use the horticulture equipment, parts and functions of common greenhouse and landscape tools, & maintenance and storage procedures for equipment	Students will understand: improper equipment use can create safety hazards and damage materials, routine maintenance increases equipment lifespan and efficiency, & selected the proper tool improves work quality and productivity	Students will be able to: safely operate horticultural hand and power equipment, inspect tools prior to operation, perform basic maintenance and cleaning procedures, & select appropriate equipment for specific horticultural tasks	Use of Machinery
105	Select the proper protective clothing and equipment.	Botany/Plant Science Construction Intro to Ornamentals & Greenhouse Mgmt	Students will know: the basics of first aid, how to read SDS's, and properly and safely use the horticulture equipment	Students will understand: different horticultural tasks require specific personal protective equipment (PPE) to minimize hazards, properly selected and maintained PPE reduces the risk of injury and exposure to harmful substances, & wearing	Students will be able to: demonstrate all laboratory safety, general safety, and field-site safety practices & procedures, write new SDS's for horticulture products, and perform basic first aid	Practical Application

				appropriate protective clothing is an essential professional practice that promotes workplace safety.		
	RESERVED (106)	-				

200 Safe and Proper Plant Health Care Practices

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
201	Control weeds, insects, and plant diseases.	Landscape Design & Maintenance Natural Resource Management	Define invasive species and understand their characteristics. Identify the ecological and economic impacts of invasive species on native ecosystems. Explore specific examples of invasive species and their effects on biodiversity. Define pest management and understand its significance in agriculture and ecosystems. Explore methods such as cost/benefit analysis, cumulative effects analysis, environmental impact analysis, ethical analysis, and risk analysis used in pest management. Understand the importance of sustainable and ethical pest management practices.	Evaluate the cascading effects of invasive species on native flora and fauna. Critically assess the effectiveness and sustainability of pest management strategies using cost/benefit analysis, cumulative effects analysis, environmental impact analysis, ethical analysis, and risk analysis. Understand the trade-offs involved in different pest management approaches. Understand how invasive species can alter ecosystem dynamics, nutrient cycling, and community structure.	Conduct a comprehensive analysis using cost/benefit, cumulative effects, environmental impact, ethical, and risk analysis. Reflect on the ethical implications of different control methods. Develop a plan to control specific environmental factors in a given scenario (e.g., a greenhouse, agricultural field). Incorporate techniques to regulate temperature, humidity, and soil conditions. Discuss the potential benefits and challenges associated with the proposed environmental control plan.	Quiz

202	Interpret horticulture product labels.	Intro to Ornamentals & Greenhouse Mgmt	Students will know: how to read and interpret product labels, calculate proper mixes for liquid applications, understand the laws for pesticide applications, and analyze site characteristics for horticulture industries	Students will understand: horticulture product labels contain important information that ensures products are used safely, effectively, and legally, following label instructions helps protect people, plants, animals, and the environment from potential harm, & accurate interpretation of product labels is essential for selecting the correct product, determining proper application rates, and achieving desired results.	Students will be able to: read product labels, calculate and mix any type of horticultural product based on test results and mixing procedures, apply pesticides safely and appropriately according to law, and analyze site locations for best criteria	Quiz
203	Formulate quantities of horticultural products used in plant health care.	Horticulture II	Students will know: how to read and interpret product labels, calculate proper mixes for liquid applications, understand the laws for pesticide applications, and analyze site characteristics for horticulture industries	Students will understand: accurate calculations are critical for safe and effective pesticide and fertilizer applications, improper mixing rates can harm plants, applicators, and the environment, product labels provide legal requirements for application rates and procedures, & mathematical precision ensures compliance with industry standards and regulations.	Students will be able to:read product labels, calculate and mix any type of horticultural product based on test results and mixing procedures, apply pesticides safely and appropriately according to law, and analyze site locations for best criteria	Product Calculation Worksheet & Mixing Lab Practical
	RESERVED (204)	-				

205	Investigate the concept of plant health care, e.g., disease, nutrients.	Natural Resource Management Plant Science & Ornamentals	Students will know: about the various career fields within the horticulture industry, major historical events in the field of horticulture, how the horticulture industry impacts our country's economics, why horticulture has a psychological impact, and a basic overview of plant health care	Students will understand: plant health care is a preventative approach that integrates cultural, biological, and chemical management practices, healthy plants are more resistant to pests, diseases, and environmental stressors, plant health care requires continuous monitoring and informed decision-making, & sustainable management practices improve long-term plant vigor and environmental quality.	Students will be able to: identify the various components of plant health care, define the importance of the horticulture industry economically and psychologically	Quiz and Practical Application
206	Distinguish the components of an integrated pest management program including the effects of chemicals and pesticides on the environment.	Plant Science & Ornamentals	Students will know: the various pathogens present in PA, how to sustainably control pests using IPM methods, and how to use sustainable methods of control	Students will understand: IPM emphasizes prevention before treatment, biological, cultural, mechanical, and chemical controls each play a role in pest management, effective IPM minimizes environmental impacts while maintaining plant health, & monitoring and threshold levels guide management decisions.	Students will be able to: create and implement an IPM plan geared toward specific pathogens	IPM Case Study
207	Analyze various horticultural pests including their signs and symptoms.	Plant Science & Ornamentals	Students will know: the various pathogens present in PA, how to sustainably control pests using IPM methods, and how to use sustainable methods of control	Students will understand: accurate identification is necessary for effective control strategies, different pests produce unique damage symptoms, environmental conditions often influence pest	Students will be able to: create and implement an IPM plan geared toward specific pathogens	Pest ID Quiz

				outbreaks, & early detection reduces economic losses and plant damage.		
	RESERVED (208)	-				
209	Prepare for PA Pesticide Certification.	Horticulture II	Students will know: pesticide laws and regulations, pesticide label requirements, environmental and health risks associated with pesticide misuse, IPM strategies	Students will understand: pesticide applicators have legal and ethical responsibilities, proper application reduces environmental contamination and human exposure, & IPM strategies can reduce pesticide dependence	Students will be able to: interpret labels and SDS information, calculate pesticide application rates, ID proper PPE, and apply pesticide safety and handling procedures	Applicator Exam

300 Basic Botany

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
301	Describe the process of photosynthesis, respiration, translocation, and transpiration.	Natural Resource Management Plant Science & Ornamentals	Students will know: how the processes of photosynthesis, cellular respiration, translocation & transpiration work in plants, and how these processes sustain all life	Students will understand: photosynthesis, respiration, translocation, and transpiration are interconnected processes that enable plants to grow, survive, and reproduce, plants require energy, water, nutrients, and gases from their environment to carry out essential life processes, & environmental conditions can affect the efficiency of these processes and ultimately influence plant health and productivity	Students will be able to: describe how photosynthesis, cellular respiration, translocation, & transpiration work in plants, and how these processes sustain all life	Quiz and Lab

302	Compare plant cell structure, organization, and function.	Plant Science & Ornamentals	Students will know: the difference between the components and structures of a plant cell and an animal cell, and the structures of plant cells and their function	Students will understand: the structure of plant cells is directly related to their function and ability to support plant growth and survival, specialized organelles within plant cells perform specific tasks necessary for life processes such as photosynthesis, storage, and transport, & the organization of cells into tissues and organs allows plants to efficiently carry out complex biological functions.	Students will be able to: identify plant components and structures, articulate the functions of plant structures, discuss the differences between a plant cell and an animal cell	Quiz and Lab
303	Compare plant structures and explain their functions.	Plant Science & Ornamentals	Students will know: how plant structures directly correlates to its function, what conditions are required for seed germination, identify germination issues, and discuss how to change environmental factors to suit plant needs.	Students will understand: each plant structure has specialized functions that contribute to the plant's growth, reproduction, and survival, the form and structure of plant parts are closely related to their role within the plant, & healthy plant development depends on the interaction and proper functioning of all plant structures.	Students will be able to: germinate any seed any time of the year, manipulate growing conditions, explain the anatomy and physiology of plant structures	Quiz and Lab
304	Analyze conditions essential for seed germination.	Plant Science & Ornamentals	How plant structures directly correlates to its function, what conditions are required for seed germination, identify germination issues, and discuss how to change environmental factors to	Students will understand: seeds require specific environmental conditions, including moisture, oxygen, temperature, and sometimes light, to germinate successfully, variations in environmental	Be able to germinate any seed any time of the year, manipulate growing conditions, explain the anatomy and physiology of plant structures	Quiz and Lab

			suit plant needs	conditions can affect germination rates and seedling vigor, & understanding germination requirements allows horticulturists to manipulate growing conditions and improve plant production success.		
305	Explain the environmental factors that affect the growth and development of a plant.	Plant Science & Ornamentals Agriscience Natural Resource Management	Students will know: key environmental factors affecting plant growth include light, water, temperature, soil composition, and air quality, plants require specific ranges of environmental conditions to carry out photosynthesis, respiration, and nutrient uptake effectively, & biotic and abiotic factors both influence plant health, including pests, competition, and availability of resources.	Students will understand: plant growth and development are directly influenced by environmental conditions, and even small changes can significantly impact plant health and productivity, each plant species has unique environmental requirements and tolerances that determine where it can successfully grow, & managing environmental factors can improve plant performance, reduce stress, and increase yield in both natural and controlled settings.	Students will be able to: identify and analyze how specific environmental factors (light, water, temperature, soil) affect plant growth in real or simulated scenarios, compare plant growth under different environmental conditions and interpret results to determine optimal growing conditions, & recommend adjustments to environmental conditions to improve plant health and development in a given situation (e.g., greenhouse or garden setting).	Quiz and Lab
306	Distinguish between sexual and asexual plant reproduction.	Botany & Plant Science & Ornamentals	How plants reproduce and differentiate between asexual and sexual reproduction	Students will understand: plants reproduce through both sexual and asexual methods, each offering different advantages for survival, adaptation, and propagation, sexual reproduction increases genetic diversity, while	Be able to explain the process of sexual and asexual reproduction and create circumstances that allow for maximum reproductive success	Quiz

				asexual reproduction produces genetically identical offspring that maintain desirable traits, & horticulturists select propagation methods based on plant characteristics, production goals, and desired outcomes.		
307	Analyze plant nutrient requirements.	Natural Resource Management Botany & Plant Science Ornamentals	Students will know: how to analyze soil and remediate if necessary, identify the 16 plant nutrients, describe nutrient function in plants, identify nutrient deficiencies, explain how soil forms, and what components make up soil	Students will understand: plants require essential macro- and micronutrients to support growth, development, reproduction, and overall health, nutrient deficiencies or excesses can negatively affect plant appearance, productivity, and survival, & proper nutrient management promotes healthy plant growth while supporting sustainable horticultural practices and environmental stewardship.	Students will be able to: identify essential macro- and micronutrients required for healthy plant growth, & diagnose nutrient deficiency and toxicity symptoms in plants.	Test
308	Describe the nutrient cycles.	Botany & Plant Science & Ornamentals	Students will know: nutrient cycles include key processes such as the carbon, nitrogen, phosphorus, and water cycles that move essential elements through ecosystems, nutrients are recycled between living organisms (plants, animals, microbes) and nonliving components (soil, water,	Students will understand: nutrient cycles are essential for sustaining life because they continuously recycle elements needed for plant growth and ecosystem function, disruptions to nutrient cycles (such as pollution, deforestation, or overuse of fertilizers) can negatively impact soil health and ecosystem	Students will be able to: diagram and explain the major steps in a nutrient cycle (carbon, nitrogen, phosphorus, or water), analyze how nutrients move through an ecosystem and identify where they may be lost or added, & evaluate the impact of human practices (e.g., fertilization, farming, pollution) on	Test

			air), & soil organisms such as bacteria and fungi play an important role in breaking down organic matter and returning nutrients to the soil.	balance, & human activities can both support and interfere with nutrient cycling, influencing agricultural productivity and environmental quality.	nutrient cycling and propose improvements.	
309	Classify plants and use appropriate binomial taxonomic terminology.	Horticulture II Botany & Plant Systems	Students will know: the levels of taxonomy, Linnaeus' classification system, and the historical and modern uses of plants across the world	Students will understand: plants are classified using a hierarchical taxonomic system that organizes living organisms based on shared characteristics and evolutionary relationships, binomial nomenclature provides a universal naming system using genus and species to accurately identify plants worldwide, & proper classification and scientific naming reduce confusion caused by common names and ensure clear communication in the horticulture industry.	Students will be able to: Identify the levels of taxonomy, Linnaeus' classification system, and the historical and modern uses of plants across the world	Quiz

310	Describe techniques used to control environmental factors.	Horticulture II Natural Resource Management	Students will know: environmental control techniques include irrigation systems, shade structures, heating/cooling systems, ventilation, and greenhouse management practices, key environmental factors that can be controlled include temperature, light intensity, humidity, soil moisture, and air circulation, & tools such as thermostats, timers, sensors, and automated controllers are commonly used to regulate growing conditions.	Students will understand: controlling environmental factors allows growers to create optimal conditions for plant growth regardless of external weather or seasonal changes, different plant species require specific environmental controls, and improper management can lead to stress, reduced growth, or crop loss, & technology and management strategies can improve efficiency, conserve resources, and increase crop quality and yield.	Students will be able to: identify and describe appropriate environmental control techniques for different plant production settings (greenhouse, field, indoor growing), analyze plant growth scenarios and recommend adjustments to environmental controls to improve plant health, & design a basic plan for managing environmental factors in a controlled growing system such as a greenhouse or hydroponic setup.	Quiz & Practical Application
311	Describe how weather and climate impact growing conditions and plant selection.	Horticulture II	Students will know: climate zones, & plant hardiness zones, effects of temperature, precipitation, sunlight, humidity, & wind on plants, seasonal growing patterns, & microclimates and their impacts on plant growth	Students will understand: weather and climate directly influence plant survival and increased maintenance, & climate conditions influence pest and disease prevention	Students will be able to: select plants appropriate for specific climate conditions, analyze weather data to make horticultural decisions, identify environmental stress symptoms in plants, & modify growing environments to improve plant health	Project and Practical Application

400 Horticulture Business Operations

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
	RESERVED (401-402)	-				
403	Develop a horticultural business plan.	Horticulture II	Students will know: components of a business plan, startup and operating costs, target markets and customer demographics, & marketing and advertising strategies	Student will understand: successful businesses require financial planning & organization, profitability depends on balancing expenses and revenue, & customer demand influences business success	Students will be able to: develop a basic horticultural business plan, create a startup budget, identify target audiences and marketing strategies, and present business proposals professionally	Business Plan and Spring Plant Sale
404	Analyze pricing and mark-up techniques.	Ag Business & Marketing	Agribusinesses provide products and services from planning to production to retail. Enterprises incur expenses, such as inputs and noncurrent asset purchases. A balance sheet shows the financial position of a business at a point in time. An income statement summarizes income and expenses over a specific period to calculate net income. Projected cash flow statements are used to anticipate and plan for seasonal fluctuations in income and expenses. Lenders review financial statements to determine the	The products and services provided by agribusinesses need to fit the needs of the community and provide profitable income in order for them to continue to be available. These expenses are necessary in order to generate income for a business. Business managers measure the health of an enterprise by analyzing financial documents. The goal of a financial review by a lender is to minimize their own risk prior to lending money to a business or entrepreneur.	Calculate breakeven and use it to analyze the feasibility of an enterprise. Classify typical business expenses as fixed, variable, or noncurrent asset purchase. Analyze the financial health of business operations. Complete an income statement. Identify seasonal income and expense fluctuations. Complete a projected cash flow statement. Develop a process to analyze the financial position of a business for lender approval of a loan.	Quiz

			viability of a business when reviewing a loan application.			
	RESERVED (405)	-				
406	Research vendors to obtain product information.	Horticulture II	Students will know: sources of horticultural products and services, product specifications and quality standards, vendor pricing structures and purchasing options, & methods for comparing suppliers.	Students will understand: vendor selection impacts profitability and product quality, reliable suppliers contribute to successful business operations, cost comparisons should include quality, availability, and service, & research supports informed purchasing decisions.	Students will be able to: compare multiple vendors, evaluate product specifications and pricing, request and interpret product information, & recommend vendors based on business needs.	Vendor Research & Comparison Report
407	Perform appropriate customer and client relationship attributes.	Ag Business & Marketing Construction	Students will know: key talking points when discussing designs with clients, how to present projects and proposals, and know the components of a proposal Products and services are developed to meet consumer needs.	Entrepreneurs anticipate the interests of consumers by researching trends. Competition and marketing influence consumers choosing similar goods and services.	Students will be able to: create proposals, estimate costs, and present proposals to clients List consumed need and want items and identify source(s) for each. Conduct market research and analyze data collected from a survey to discover a product or service to offer related to an agribusiness of interest.	Practical Application
	RESERVED (408)	-				

409	Analyze record keeping systems to determine best management practices.	Ag Business & Marketing	Farms and ranches are businesses and must be managed in an organized, intentional manner. Interest paid on loan principal is a business expense. The decrease in asset value due to depreciation is a business expense. Businesses measure profitability in two ways, net income and return on assets (ROA). The breakeven point of an enterprise occurs when the expenses match the income. Decision-makers use financial documents to plan and manage a business.	Specific types of organizational systems exist and are commonly used for particular purposes in the industry. Business managers use graphs and calculators developed in spreadsheet software to make management decisions.	Implement an organizational system to file course documents. Calculate interest for business scenarios. Calculate depreciation using straight-line method. Calculate and analyze net income and return on assets for business scenarios. Identify income and expenses from raw enterprise records. Make a graph using spreadsheet software illustrating the portion of income compared to expenses for an enterprise. Build common financial calculators in spreadsheet software for use throughout the course.	Practical Application & Project
	RESERVED (410)	-				

500 Soils and Fertilizer

Item	Task	Secondary Course Cross-Walk				
501	Compare soil/media characteristics.	Plant Science & Ornamentals Agriscience Natural Resource Management	Students will know: the physical and chemical properties of soil and growing media, including texture, structure, porosity, drainage, aeration, water-holding capacity, and	Students will understand: soil and growing media characteristics directly influence plant growth, root development, and nutrient availability, different plants require different soil and	Students will be able to: compare and contrast the characteristics of different soil types and growing media, evaluate soil and media suitability for specific horticultural applications,	Quiz

			pH, the components of common growing media such as sand, silt, clay, peat moss, perlite, vermiculite, bark, and compost, & the advantages and disadvantages of various soil and media types for horticultural production	media conditions to achieve optimal growth and productivity, physical and chemical properties of soil affect water movement, aeration, and plant health, & selecting the appropriate soil or growing medium is essential for successful horticultural production.	identify soil and media components and describe their functions, & recommend appropriate growing media based on plant and production requirements.	
502	Analyze soil and/or plant nutrients.	Plant Science & Ornamentals Agriscience Natural Resource Management	Students will know: the essential macro- and micronutrients required for plant growth, the functions of individual nutrients within plants, common nutrient deficiency and toxicity symptoms, & soil testing methods and nutrient analysis procedures.	Students will understand: plants require specific nutrients in appropriate amounts to support growth, development, and reproduction, nutrient deficiencies and excesses can negatively impact plant health, quality, and productivity, soil and plant analysis provide valuable information for making nutrient management decisions, & proper nutrient management promotes sustainable plant production while minimizing environmental impacts.	Students will be able to: identify essential plant nutrients and describe their functions, interpret soil and plant nutrient analysis reports, diagnose nutrient deficiencies and toxicities in plants, & recommend fertilizer and nutrient management strategies based on analysis results.	Quiz & Practical Application
503	Describe soil management techniques.	Natural Resource Management	Students will know: common soil management practices including tillage, mulching, cover cropping, composting, erosion control, and soil amendment applications, factors that contribute to soil health and productivity,	Students will understand: effective soil management improves soil health, plant growth, and long-term productivity, soil conservation practices help reduce erosion, nutrient loss, and environmental degradation, sustainable	Students will be able to: evaluate soil conditions and identify management needs, recommend appropriate soil management practices for specific situations, apply soil amendments and conservation practices to	Quiz

			& sustainable practices used to improve soil quality and fertility.	soil management supports healthy ecosystems and responsible resource use, & soil management decisions influence water quality, nutrient availability, and overall plant performance.	improve soil quality, & develop soil management plans that support sustainable horticultural production.	
504	Conduct proper soil sampling techniques.	Intro to Ornamentals & Greenhouse Mgmt Horticulture II	Students will know: proper soil sampling methods & procedures, factors that influence soil quality, tools used for soil collection, and importance of representative sampling	Students will understand: accurate soil samples lead to reliable soil test results, improper sampling can produce misleading recommendations, & soil characteristics vary across landscapes	Students will be able to: collect representative soil samples, use soil sampling tools correctly, label and prepare samples for analysis, & follow proper soil sampling protocols	Conducting Soil Samples & Analysis
505	Test soil for pH, texture, macronutrients, and soluble salts.	Intro to Ornamentals & Greenhouse Mgmt Horticulture II	Students will know: soil testing procedures and equipment, importance of pH and nutrient availability, soil texture classifications, & effects of soluble salts on plant growth	Students will understand: soil properties directly impact plant health and productivity, nutrient imbalances can limit plant growth, & different plants require different soil conditions	Students will be able to: perform soil pH and nutrient tests, identify soil texture by feel and analysis, interpret soluble salt measurements, & recommend corrective soil amendments	Conducting Soil Tests & Analysis
506	Interpret commercial soil test reports.	Intro to Ornamentals & Greenhouse Mgmt Horticulture II	Students will know: components of commercial soil test reports, nutrient recommendations and fertilizer analysis, soil amendment recommendations, & terminology used in soil analysis reports	Students will understand: soil test reports guide nutrient management decision, improper fertilizer application can harm plants and the environment, & data interpretation supports sustainable horticultural practices	Students will be able to: analyze soil test reports, identify nutrient deficiencies and excesses, recommend fertilizers and amendments, & explain soil test results using scientific terminology	Quiz & Analyzing Soil Reports
507	Describe criteria for selecting fertilizers and soil amendments.	Intro to Ornamentals & Greenhouse Mgmt Horticulture II	Students will know: the differences between fertilizers and soil amendments and their	Students will understand: fertilizers and soil amendments serve different functions but both	Students will be able to: differentiate between fertilizers and soil amendments and explain	Quiz and Practical Application

			purposes in horticultural production, types of fertilizers, including organic, inorganic, slow-release, and water-soluble fertilizers, common soil amendments such as compost, lime, sulfur, gypsum, peat moss, and organic matter, & factors that influence fertilizer and amendment selection, including soil test results, plant nutrient requirements, soil pH, soil texture, and environmental conditions.	contribute to healthy plant growth and soil quality, soil test results provide important information for selecting appropriate fertilizers and amendments, plant species, growth stage, and environmental conditions influence nutrient and soil amendment needs, & proper selection and use of fertilizers and soil amendments promotes plant health, improves soil quality, and minimizes environmental impacts.	their functions, interpret soil test results to determine fertilizer and amendment needs, select appropriate fertilizers and soil amendments based on plant requirements and site conditions, calculate and recommend application rates for fertilizers and amendments, evaluate the environmental and economic impacts of fertilizer and amendment choices, & develop nutrient and soil management recommendations for horticultural production systems.	
508	Describe factors influencing fertilizer application.	Natural Resource Management	Students will know: fertilizer types and application methods, plant nutrient requirements, environmental factors affecting fertilizer efficiency, & timing and rates of fertilizer application	Students will understand: overapplication can contribute to pollution and plant injury, environmental conditions affect nutrient uptake, & proper fertilization promotes sustainable plant growth	Students will be able to: calculate fertilizer application rates, select appropriate fertilizers for specific situations, evaluate environmental risks associated with fertilizer use, & develop fertilizer management plans	Quiz and Practical Application
	RESERVED (509-511)	-				

512	Compare current issues regarding plant and soil management that impacts agronomic and horticultural practices.	Horticulture II Natural Resource Managment	Students will know: current issues affecting plant and soil management, including soil degradation, erosion, nutrient runoff, water quality concerns, invasive species, pesticide use, climate change, and soil health, sustainable and conventional management practices used in agronomic and horticultural systems, the role of technology, regulations, and environmental stewardship in plant and soil management, & the economic, environmental, and social impacts of plant and soil management decisions.	Students will understand: plant and soil management practices have significant impacts on agricultural productivity, environmental quality, and long-term sustainability, current issues such as nutrient management, soil conservation, water quality, and climate change require informed decision-making and adaptive management practices, sustainable management practices can improve soil health, conserve natural resources, and reduce negative environmental impacts while maintaining productivity, & agronomic and horticultural producers must balance economic goals, environmental stewardship, and regulatory requirements when making management decisions.	Students will be able to: research and evaluate current issues affecting plant and soil management, compare the advantages and disadvantages of conventional and sustainable management practices, analyze the environmental, economic, and social impacts of various plant and soil management decisions, interpret case studies related to soil conservation, nutrient management, water quality, and plant production, & recommend management strategies that address current challenges while promoting sustainable production.	Case Study
513	Analyze microbial life and its effects on soil.	Plant Science/Botany Agriscience	Students will know: types of beneficial and harmful soil microorganisms, microbial roles in nutrient cycling and decomposition, relationships between microbes and plant roots, & environmental factors affecting microbial activity	Students will understand: microorganisms are essential for healthy soil ecosystems, microbial activity influences nutrient availability and soil structure, & human activities can positively or negatively impact soil biology	Students will be able to: identify beneficial and harmful soil microorganisms, analyze soil conditions affecting microbial activity, explain nutrient cycling processes, & recommend practices that support soil health	Test

600 Sustainable Horticulture

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
601	Investigate different methods of sustainable horticulture.	Natural Resource Management Botany/Plant Science Horticulture II	Students will know: various sustainable horticultural practices, including integrated pest management (IPM), composting, cover cropping, water conservation, and resource-efficient landscaping, the principles of sustainability and environmental stewardship in horticultural production systems, & the benefits and challenges associated with sustainable horticultural methods.	Students will understand: sustainable horticultural practices help conserve natural resources while maintaining plant productivity and health,environmental stewardship is an important responsibility of horticultural professionals, & sustainable practices can reduce negative environmental impacts while supporting long-term economic viability.	Students will be able to: identify and describe various sustainable horticultural practices, evaluate the effectiveness of sustainable methods in different horticultural settings, & recommend sustainable practices that improve resource conservation and environmental quality.	Quiz
602	Compare sustainable watering and fertilizing techniques to conventional techniques.	Natural Resource Management Botany/Plant Science Horticulture II	Students will know: common sustainable watering and fertilizing techniques, including drip irrigation, fertigation, rainwater harvesting, soil moisture monitoring, and slow-release fertilizers, conventional watering and fertilizing practices used in horticultural production, & factors that influence water and nutrient use efficiency.	Students will understand: water and nutrient management practices directly impact plant health, resource conservation, and environmental quality, sustainable watering and fertilizing techniques can reduce waste, pollution, and production costs, & the effectiveness of watering and fertilizing practices depends on site conditions, plant needs, and management goals.	Students will be able to: compare the advantages and disadvantages of sustainable and conventional watering and fertilizing methods, evaluate the environmental and economic impacts of different irrigation and fertility practices, & recommend appropriate watering and fertilizing strategies based on plant requirements and site conditions.	Quiz and Practical Application

603	Compare sustainable plant material selection to conventional plant material.	Natural Resource Management Botany/Plant Science Horticulture II	Students will know: characteristics of sustainable plant materials, including native, adapted, drought-tolerant, and pollinator-friendly species, characteristics of commonly used conventional plant materials, & factors that influence plant selection, including climate, site conditions, maintenance requirements, and intended use.	Students will understand: plant selection decisions affect resource use, maintenance requirements, biodiversity, and environmental sustainability, sustainable plant materials often require fewer inputs such as water, fertilizer, and pesticides than conventional selections, & choosing the right plant for the right location improves plant performance and supports long-term landscape sustainability.	Students will be able to: compare sustainable and conventional plant materials based on environmental, economic, and aesthetic considerations, evaluate plant materials for suitability in specific landscape or production scenarios, & recommend plant selections that support sustainable horticultural practices and site-specific goals.	Sustainable Landscape Design Project
604	Recycle horticultural waste.	Plant Science/Botany Agriscience Natural Resource Management	Students will know: define management and planning of resources in agriculture, identify the importance of management and planning of resources in agriculture, critique the sustainability of various agriculture practices, explain the concept of reduce, reuse, and recycle in agriculture, analyze how agricultural sciences and technologies strive to increase efficiency, & evaluate the balance between the needs of society and the conservation of natural resources.	Students will understand: explain how sustainable agriculture practices can support food security, describe the potential environmental impacts of unsustainable agriculture practices, evaluate the effectiveness of reduce, reuse, and recycle practices in agriculture, analyze the benefits and drawbacks of different agricultural technologies, & explain how sustainable agriculture practices can benefit both farmers and consumers.	Students will be able to: develop a management plan for a hypothetical farm, considering resource efficiency and sustainability, critique and propose improvements to a current agricultural practice, conduct an experiment to demonstrate the effectiveness of a reduce, reuse, or recycle technique in agriculture, cnalyze data to evaluate the efficiency of a particular agricultural technology, & develop a presentation or report on the importance of sustainable agriculture practices in society.	Practical Application

	RESERVED (605)	-				

700 Horticulture Technology

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
701	Explain the uses of technologically altered plants.	Plant Science/Botany	Students will know: what biotechnology is and the recent advancements, how biotechnology has impacted both producers and consumers, how to ethically and morally create GMO's while maintaining human health, and how we manipulate environmental conditions to increase plant yields	Students will understand: biotechnology can improve crop yield, quality, and disease resistance, genetically modified plants create ethical, environmental, and economic debates, & technological advancements continue to shape modern agriculture	Students will be able to: define and describe biotechnology and its recent developments, discuss the research and trial phase of GMO's, and manipulate environmental conditions to enhance quality and quantity	Test
	RESERVED (702-703)	-				
704	Research advanced and emerging technologies in horticulture.	Botany/Plant Science	Define resource management and planning. Identify the goals and objectives of resource management. Understand the importance of sustainable resource management for long-term environmental and economic well-being. Define natural cycles in the context of environmental processes.	Understand the consequences of inadequate or unsustainable resource planning. Understand the role of energy efficiency in promoting sustainability within the agricultural sector. Understand the interconnectedness of natural cycles and their impact on climate regulation.	Evaluate how human activities interrupt natural cycles and contribute to climate change. Analyze the environmental impact of conventional energy sources (e.g., fossil fuels) on climate change, air quality, and ecosystems. Create an educational campaign to raise awareness about the consequences of interrupting natural cycles and its relation to climate	Research Project

					change.	
705	Perform a point of sale (POS) transaction.	Horticulture II	Students will know: components of POS systems, customer service expectations, inventory tracking procedures, & sales tax and transaction procedures	Students will understand: accurate transactions support business success and customer trust, professionalism influences customer satisfaction, & inventory systems help businesses track profitability	Students will be able to: operate a POS system, complete sales transactions accurately, provide professional customer service, & manage receipts and inventory records	Spring Plant Sale Transactions (Practical Application)

800 History and Current Status of Horticulture

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
801	Describe major historical developments in the field of horticulture.	Plant Science/Botany	Students will know: about the various career fields within the horticulture industry, major historical events in the field of horticulture, how the horticulture industry impacts our country's economics, why horticulture has a psychological impact, and a basic overview of plant health care	Students will understand: horticulture has evolved over time from subsistence-based plant cultivation to a science-driven industry influenced by research, technology, and global trade, major historical developments in horticulture—such as the domestication of plants, the development of irrigation systems, and advances in plant breeding—have significantly increased food production and plant diversity, & modern horticultural practices are shaped by historical innovations and continue to build on past discoveries to	Students will be able to: analyze key historical events and innovations in horticulture and explain how they have influenced modern plant production practices, compare early horticultural methods with modern techniques to determine how plant cultivation, breeding, and management have changed over time, & research and communicate the impact of major horticultural developments on agriculture, food systems, and environmental sustainability.	Quiz and Case Study

				improve efficiency, sustainability, and environmental impact.		
802	Compare/contrast the effect human beings have had on various plant species.	Landscape Design & Maintenance	Students will know: human activities such as domestication, selective breeding, deforestation, and habitat alteration directly influence plant diversity and distribution, plant species respond differently to human impact, with some becoming more productive or resilient while others become endangered or extinct, &n genetic modification and cultivation practices can change plant traits such as yield, resistance, and growth habits.	Students will understand: human activities have altered plant distribution, genetics, and diversity, selective breeding has improved many horticultural crops, urbanization and land-use changes impact plant communities, & human actions can have both positive and negative ecological consequences.	Students will be able to: compare and contrast how different plant species have been altered by human activity using specific examples, analyze case studies to determine whether human impact on a plant species was beneficial, harmful, or both, & evaluate the ecological consequences of human-driven changes to plant populations and propose management strategies.	Quiz
803	Determine how development of certain plant species has affected cultural development.	Landscape Design & Maintenance Natural Resource Management	Students will know: certain plant species (e.g., wheat, rice, maize, cotton, tea) have played major roles in shaping civilizations and economies, the domestication and improvement of plants have influenced settlement patterns, trade routes, and population growth, & cultural traditions, diets, and industries are often closely tied to locally or regionally important plant species.	Students will understand: the development of key plant species has directly influenced the growth of societies by providing stable food sources and raw materials, agricultural advances in plant development have contributed to technological innovation, economic systems, and cultural exchange, & plants are not only biological resources but also cultural symbols that shape identity,	Students will be able to: investigate how the development of a specific plant species has influenced a particular culture or civilization, analyze the relationship between plant domestication and the growth of human societies over time, & create a presentation or written analysis explaining how a plant species impacted cultural practices, economy, and daily life.	Research Project/Presentation

				traditions, and daily life.		
804	Describe the role horticulture plays in the economy of the state and nation.	Ag Business & Marketing Ornamental Horticulture II	Students will know: about the various career fields within the horticulture industry, major historical events in the field of horticulture, how the horticulture industry impacts our country's economics, & why horticulture has a psychological impact A supply chain exists and covers: production, services/supplies, processing, transportation, and marketing. Commodities represent the raw item available directly from the producer while products have gone through processing.	Each step of the supply chain is a critical factor in providing goods and services to the public. Each step of the supply chain has economic value and job opportunities. The value of an item changes as additional steps are needed to prepare the good or service for the public.	Students will be able to:define the importance of the horticulture industry economically and psychologically, & find evidence of steps in the supply chain for a food item	Quiz
	RESERVED (805)	-				
806	Critique the impact of botanical gardens, public parks, and plants have on people in a society.	Landscape Design & Maintenance	Define resource management and planning. Identify the goals and objectives of resource management. Understand the importance of sustainable resource management for long-term environmental and economic well-being. Define natural cycles in the context of environmental processes.	Understand the consequences of inadequate or unsustainable resource planning. Understand the role of energy efficiency in promoting sustainability within the agricultural sector. Understand the interconnectedness of natural cycles and their impact on climate regulation.	Evaluate how human activities interrupt natural cycles and contribute to climate change. Analyze the environmental impact of conventional energy sources (e.g., fossil fuels) on climate change, air quality, and ecosystems. Create an educational campaign to raise awareness about the consequences of	Virtual Botanical Garden Tour

			Students will know: Landscape design rules, property value appreciation, site deficiencies, and architectural elements in a landscape design		interrupting natural cycles and its relation to climate change. Students will be able to: Describe design rules, identify site deficiencies, and install architectural structures	

900 Plant Identification

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
901	Outline the proper use of plant material in various segments of the horticulture industry.	Landscape Design & Maintenance	Students will know: major categories of plant materials including annuals, perennials, trees, shrubs, vines, turfgrass, houseplants, and specialty crops, the various segments of the horticulture industry including landscape design, greenhouse production, nursery production, floriculture, turfgrass management, interiorscaping, and arboriculture, plant growth requirements including light, water, soil, temperature, and nutrient needs, functional uses of plants such as screening, shade, erosion control, aesthetics, pollinator support, food production, and	Students will understand: different industries require different plant characteristics and functions, proper plant selection improves performance and customer satisfaction, environmental conditions influence plant suitability, & plant materials provide aesthetic, economic, and environmental benefits.	Students will be able to: identify and classify plant materials used in different horticultural industries, select appropriate plant materials based on site conditions and intended use,compare plant characteristics to determine suitability for specific projects, recommend plant materials for landscape, greenhouse, nursery, turfgrass, floriculture, and interiorscape applications, explain the benefits and limitations of selected plant materials, & develop planting plans utilizing appropriate plant materials for a given scenario.	Plant Selection Case Study

			environmental improvement, & plant characteristics including mature size, growth habit, hardiness, bloom period, and maintenance requirements.			
902	Determine the impact of environmental factors on plant materials.	Landscape Design & Maintenance Natural Resource Management Agriscience	Define point and non-point sources of pollution. Understand the differences between these sources and how they contribute to environmental degradation. Identify common examples of point and non-point pollution in various ecosystems. Define air quality and recognize common pollutants Define waste management and understand its importance for ecosystem health.	Students will understand: environmental factors such as light, temperature, water, and soil conditions directly affect plant growth, health, and productivity, different plant species have unique environmental requirements and tolerances that influence their success in a given location, environmental stress can reduce plant vigor and increase susceptibility to pests, diseases, and other disorders, & understanding environmental factors helps horticulturists make informed decisions about plant selection, placement, and management practices.	Design and conduct a water quality analysis using local water sources. Collect and interpret data on key indicators (e.g., pH, dissolved oxygen, nutrient levels). Conduct an air quality assessment using available resources or air quality monitoring tools. Propose strategies to address identified air quality issues.	Practical Application
903	Analyze characteristics of various plant categories including woody and herbaceous plants in the horticulture industry.	Landscape Design & Maintenance	Students will know: characteristics of annuals, perennials, biennials, trees, shrubs, vines, and groundcovers, growth habits and life cycles of plant groups, common landscape and greenhouse applications, & botanical	Students will understand: plant categories differ in growth, maintenance, and landscape function, life cycle characteristics influence plant selection, growth habits affect landscape design and management decisions, &	Students will be able to: classify plants by category and growth habit, differentiate woody and herbaceous species, recommend plants based on site conditions and intended use, & use botanical terminology	Quiz

			terminology used in plant identification.	proper identification improves horticultural success.	accurately.	
904	Identify 100 plants used in the horticulture industry by horticultural reference/botanical reference (70 to be deciduous, evergreen, annuals, perennials, and house plants)	Horticulture II	Students will know: the botanical and common names of 100 horticultural plants, characteristics of deciduous trees, evergreen trees and shrubs, annuals, perennials, and houseplants, & key identifying features including leaf arrangement, flower structure, bark characteristics, growth habit, and fruit or seed structures.	Students will understand: accurate plant identification is essential for proper plant selection, care, maintenance, and landscape design, plants are classified into categories such as deciduous trees, evergreen trees and shrubs, annuals, perennials, and houseplants based on their characteristics and growth habits, botanical names provide a universal system for identifying plants and reduce confusion caused by common names, & understanding plant characteristics and uses allows horticulturists to select appropriate plants for specific environmental conditions and landscape purposes.	Students will be able to: correctly identify 100 horticultural plants using both common and botanical names, distinguish between deciduous, evergreen, annual, perennial, and houseplant categories, use plant identification keys, field guides, and horticultural references to identify plants, & recognize and describe key plant characteristics used for identification.	Quiz

1000 Horticultural Careers and Opportunities

Item	Task	Secondary Course Cross-Walk	Know	Understand	Do	Assessment
1001	Describe careers and working conditions in the horticulture industry.	Botany/Plant Science	Students will know: major career pathways in horticulture, educational and certification	Students will understand: horticulture careers require technical knowledge and employability skills, working	Students will be able to: research horticulture careers, compare career pathways and salaries,	Career Project

			requirements, workplace expectations and safety requirements, & employment opportunities in the horticulture industry	conditions vary among horticulture careers, & the horticulture industry provides significant economic opportunities	identify required certifications and training, & evaluate personal career interests and goals	
1002	Perform job readiness skills needed in the horticulture industry.	Horticulture II	Students will know: workplace expectations and professional behavior, communication and teamwork skills, resume and interview techniques, & time management and problem-solving strategies	Students will understand: employability skills are essential for workplace success, professionalism influences advancement opportunities, & communication and teamwork improve workplace efficiency	Students will be able to: create resumes and cover letters, complete mock interviews, demonstrate workplace professionalism, & communicate effectively in team settings	Spring Plant Sale (Practical Application) and AET Project
1003	Research horticulture industry certifications.	Intro to Ornamental Horticulture	Students will know: common industry certifications and licensing opportunities, certification requirements and benefits, organizations offering horticulture credentials, & continuing education expectations	Students will understand: certifications increase employability and professional credibility, industry standards support safe and effective practices, & lifelong learning is important in horticulture careers	Students will be able to: research certification programs, compare certification requirements, identify career pathways connected to certifications, & develop professional growth plans	Career Project
1004	Explore postsecondary opportunities.	Intro to Ornamental Horticulture	Students will know: postsecondary education pathways in horticulture, trade schools, colleges, apprenticeships, and certification programs, financial aid and scholarship opportunities, & admission requirements and career outcomes	Students will understand: postsecondary training can expand career opportunities, different pathways meet different career goals, & education and experience influence career advancement	Students will be able to: research postsecondary programs, compare educational pathways, identify admission and financial aid requirements, & develop postsecondary plans aligned with career goals	Career Project

1100 Horticultural Pathways

Item	Task	Secondary	Know	Understand	Do	Assessme

		Course Cross-Walk				nt
1101	Apply concepts of landscape, hardscape, or floral design.	Landscape Design & Maintenance Construction	Students will know: principles and elements of design, landscape and hardscape materials, floral design techniques and terminology, & client needs and site considerations	Students will understand: effective designs balance function, aesthetics, and sustainability, design choices impact maintenance and environmental health, & design principles improve visual appeal and usability	Students will be able to: create landscape, hardscape, or floral designs, select appropriate materials and plants, apply design principles to projects, & evaluate designs for functionality and aesthetics	Landscape Design Project
1102	Create various horticulture designs.	Landscape Design & Maintenance	Students will know:drafting and design techniques, plant selection principles, design software and drawing tools, & scale and spacing requirements	Students will understand: proper planning improves project success, designs must account for environmental and client needs, & plant growth habits influence long-term design success	Students will be able to: sketch and create horticultural designs, use design software and drafting tools, calculate plant spacing and material needs, & present completed designs professionally	Landscape Design Project
1103	Calculate measurements, areas, and volumes of horticulture designs.	Landscape Design & Maintenance	Students will know: formulas for area, perimeter, and volume, measurement tools and units, estimating methods for landscape materials, & mathematical applications in horticulture	Students will understand: accurate measurements reduce waste and costs, calculations support proper material selection and project planning, & estimation errors can negatively impact projects	Students will be able to: calculate area, perimeter, and volume, estimate quantities of mulch, soil, gravel, and plant materials, use measurement tools accurately, & apply mathematical concepts to design projects	Landscape Design Project
1104	Interpret landscape design, symbols, and abbreviations.	Landscape Design & Maintenance	Students will know: common landscape design symbols and abbreviations, blueprint terminology and scales, design layout conventions, & drafting standards used in horticulture	Students will understand: design symbols communicate project information efficiently, accurate interpretation improves project implementation, & landscape plans guide	Students will be able to: read landscape design plans, interpret symbols, scales, and abbreviations, communicate design information accurately, & apply design plans during installation projects	Farm Show Landscape Design Implementat ion

				installation and maintenance decisions		
1105	Transplant various types of plant material.	Botany/Plant Science Landscape Design & Maintenance	Students will know: transplanting procedures and timing, root structure and plant stress responses, watering and aftercare requirements, & tools and materials used for transplanting	Students will understand: improper transplanting can damage roots and reduce survival rates, environmental conditions influence transplant success, & proper handling minimizes transplant shock	Students will be able to: transplant containerized and field-grown plants, prepare planting sites properly, provide post-transplant care, & evaluate transplant success and plant health	Practical Application
1106	Prune various types of plant material.	Intro to Ornamentals & Greenhouse Mgmt Horticulture II	Students will know: pruning techniques and tools, plant growth habits and pruning objectives, seasonal pruning requirements, & safety procedures for pruning equipment	Students will understand: pruning influences plant health, growth, and aesthetics, improper pruning can damage plants and increase disease risk, & pruning practices vary by species and purpose	Students will be able to: safely use pruning equipment, perform thinning, heading, and rejuvenation cuts, prune plants according to industry standards, & identify improper pruning practices	Practical Application
1107	Describe the characteristics of lawn/turfgrass installation and maintenance.	Landscape Design & Maintenance Horticulture II	Students will know: turfgrass species and growth requirements, site preparation procedures, watering, mowing, and fertilization practices, & common turfgrass pests and disorders	Students will understand: proper maintenance improves turf health and appearance, environmental conditions influence turfgrass performance, & sustainable practices reduce environmental impacts	Students will be able to: prepare sites for turf installation, identify turfgrass species, develop turf maintenance schedules, & diagnose common turf problems	Quiz and Practical Application
1108	Describe the characteristics and features of various types of growing structures.	Botany/Plant Science Horticulture II	Students will know: types of greenhouses and growing structures, environmental control systems, greenhouse materials and construction methods, & safety and maintenance requirements	Students will understand: growing structures modify environmental conditions for plant production, environmental controls influence crop quality and efficiency, & structure design impacts energy use and sustainability	Students will be able to: identify greenhouse components and systems, monitor environmental conditions, evaluate advantages and disadvantages of different structures, & maintain growing structure	

					cleanliness and safety	
1109	Prepare plant material for marketing or sales.	Intro to Ornamentals & Greenhouse Mgmt Horticulture II	Students will know: grading and quality standards, packaging and labeling requirements, inventory and display procedures, & customer expectations and marketing techniques	Students will understand: presentation influences customer purchasing decisions, proper handling maintains plant quality during sales,& marketing strategies impact profitability	Students will be able to: prepare and label plants for sale, create attractive displays, evaluate plant quality, & assist customers professionally	Marketing Project & Spring Plant Sale
1110	Recognize non-traditional growth and propagation of various plant materials. (examples may include but are not limited to: hydroponics, aquaponics, aeroponics, and tissue culture)	Botany/Plant Science Horticulture II	Students will know: principles of hydroponics, aquaponics, aeroponics, and tissue culture, equipment and materials used in alternative systems, environmental requirements for controlled systems, advantages and disadvantages of nontraditional production methods	Students will understand: controlled environment systems can improve efficiency and production, nontraditional systems may conserve water and space, & technological advancements are changing modern plant production	Students will be able to: compare alternative growing systems, identify components of hydroponic and aquaponic systems, monitor environmental conditions in controlled systems, evaluate sustainability and efficiency of different production methods	Quiz & Hydroponic Project

Dover Area School District
Curriculum Cover Sheet

CIP Code: 52.1801

CIP Title: Sales, Distribution, & Marketing Operations, General

Planned Hours: 980

CIP Description:

A program that focuses on the general process and techniques of direct wholesale and retail buying and selling operations and introduces individuals to related careers. Includes instruction in the principles of entrepreneurial economics, basic sales skills, the distribution channels for goods and services, and supervised practical application experiences.

Component Courses:

610 - Financial and Career Explorations (120 hours)

This course consists of two main components: Financial Literacy and Career Explorations. The Financial Literacy component is designed for students to build a strong foundation of personal financial skills to assist in preparation for adulthood. Emphasis will be placed on the following: managing personal spending to meet financial goals, understanding and controlling the use of credit and debt, developing an awareness of the impact of education on earning potential, exploring how money can work for us through saving and investing, using financial services, and the protection of assets through risk management. Students will use real-world examples and take part in activities including goal writing, personal budgets, investing simulations, and checking and savings account applications. The career portion of the class emphasizes the Pennsylvania Academic Standards for Career Education and Work. The class will provide students with the opportunity to begin or continue their examination into the future beyond high school. Students will have the opportunity to identify their personal aptitudes, abilities, and interests and connect those to possible career placements. Satisfactory completion of Smart Futures activities 1, 2, 3, 6, 7, 12, 14, and 15 is required to earn the credit for the course.

645 - AP Business with Personal Finance (120 hours)

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AP Business with Personal Finance is a college-level course that introduces students to core business concepts—including entrepreneurship, marketing, management, accounting, and finance—while building essential personal financial literacy skills. Students learn how businesses identify customer needs, compete in markets, make strategic and ethical decisions, and manage operations using real-world case studies and project-based learning. Satisfactory completion of Smart Futures activities 1, 2, 3, 6, 7, 12, 14, and 15 is required to earn the credit for the course. The course also equips students with practical financial skills such as budgeting, saving, borrowing, managing risk, and investing for long-term goals. Major projects include developing a new product through a Business Canvas Project and completing a Financial Advisor Project.

660 - Microsoft Office (120 hours)

Microsoft Office is a comprehensive course designed to teach students intermediate-level software applications using Microsoft Office. This course includes Word, Excel, PowerPoint, and the Internet. In addition, students will complete integrated projects and internet research tasks. Students will have the opportunity to earn a Microsoft Office Specialist credential through Certiport. These software application skills benefit students in all areas of life.

661- Management & Leadership (120 hours)

College in the High School Course

Are you a leader or aspiring leader in our school? Do you want to improve your leadership abilities? The Management & Leadership course introduces students to key leadership and ethical knowledge and skills, including integrity, trust, accountability, transparency, fairness, and respect. Students will use real-world situations to help strengthen their leadership and ethical decision-making skills through the planning, implementation, and evaluation of a class service-learning project. Students may opt to receive college credit for this course through an articulation agreement with York College.

662 - Advanced Microsoft Office (120 hours)

Advanced Microsoft Office is a comprehensive course designed to teach students ***advanced-level*** applications in ***Microsoft Office.*** Students will have the opportunity to utilize and develop broader skills learned in Microsoft Office. Emphasis is placed on the following advanced applications: Word, PowerPoint, and Excel. Internet search strategies will be used to gather/collect information from websites to create and enhance student projects. Priority will focus on the integration of software packages and student application projects. Skills learned in the advanced course will benefit students in their academic, personal, and business lives.

Dover Area School District
Curriculum Cover Sheet

664 - School Store (120 hours)

REQUIRED: STUDENTS MUST BE A MEMBER OF DOVER DECA OR ENROLLED IN THE ACCOUNTING, BUSINESS OFFICE MANAGEMENT, OR MARKETING PATHWAY.

The students in this course assist the managers of the school store in preparing and operating our student-run business, The RED Zone. This course focuses on product and service marketing functions. Students will learn the fundamental elements needed to design and promote a retail store. Students will study market research strategies and consumer behavior and buying patterns. Students will then select product lines, merchandise, order inventory, price, display, advertise, and sell their chosen products. Major areas of study include advertising, visual merchandising/display, and selling. In addition, the basic concepts of employee/employer relationships, leadership models, and fundamental management skills will be explored. Students will receive instruction tied to the National Retail Federation Foundations Customer Service and Operations & Profit certifications. *Students interested in becoming next year's school store managers must successfully complete this course during their junior year and enroll in the Marketing pathway for consideration.*

667 - Sports & Entertainment Marketing (120 hours)

The Sports & Entertainment Marketing course develops student understanding of the sport/event industries and their impact on local communities and products. In addition, instruction includes distribution systems and strategies, pricing considerations, marketing-information management, selling, product-service management, and promotion. Students acquire an understanding and appreciation of the need for planning. Throughout the course, students are presented with problem-solving situations for which they must apply academic and critical thinking skills.

668 - Entrepreneurship (120 hours)

Are you hoping to start your own business one day? Entrepreneurship introduces students to a wide array of entrepreneurial concepts and skills, including the role of entrepreneurship in our economy, entrepreneurial discovery processes, ideation, and preliminary start-up venture planning. Students also develop an appreciation for marketing's pivotal role in the development and success of a new business. They become acquainted with channel management, pricing, product/service management, and promotion. Students conduct thorough market planning for their ventures: selecting target markets; conducting market, SWOT, and competitive analyses; forecasting sales; setting marketing goals and objectives; selecting marketing metrics; and setting a marketing budget. The capstone activity in the course is the development of a start-up business plan and detailed marketing plans for students' businesses.

Dover Area School District
Curriculum Cover Sheet

685 - Business & Marketing Essentials/DECA (120 hours)

Are you interested in learning about careers in marketing or business? Are you interested in learning more about DECA? This course is an introductory level course that enables students to acquire a realistic understanding of business practices while introducing them to the opportunities available through the DECA organization. Students will use their creativity to develop business documents, promotional items, and presentations. They will also be presented with ethical dilemmas and problem-solving situations for which they must apply academic and critical-thinking skills. Completion of this course will give students the general knowledge necessary to participate and compete in the district and state DECA conferences if desired.

686 - Social Media in Business and Society (120 hours)

College in the High School

REQUIRED: STUDENTS MUST BE A MEMBER OF DOVER DECA AND/OR ENROLLED IN ONE OF THE BUSINESS PATHWAYS: ACCOUNTING, BUSINESS OFFICE MANAGEMENT, OR MARKETING.

Examination of the strategic use of social media for personal, professional, and business communication, advertising, and marketing. Coursework includes using various social media tools, creating and sharing content, and collaborating on group campaigns using social media for positive change. Includes analysis of current and emerging social media tools from a personal and business perspective. We will be using an online platform and textbook for which each enrolled student is responsible for covering the cost (lab fee). This course will also require access to social media content from Facebook, Instagram, TikTok, Snapchat, Twitter, Pinterest, LinkedIn, and YouTube during the course. Sales, Distribution, & Marketing Operations, General CIP 52.1801

Pacing Guide

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610 - Financial and Career Explorations	**Associated Tasks**	**120 Hours**
Unit 1: Financial Goals & Money Management Tools	801	12
Unit 2: Income	N/A	23
Unit 3: Spending & Credit	1205	19
Unit 4: Saving & Investing	N/A	18
Unit 5: Risk & Insurance	803	11
Unit 7: Career Acquisition & Preparation	301-305,307, 1602-1605	18
Unit 8: Career Retention & Advancement	1103-1104	19

645 - AP Business with Personal Finance	**Associated Tasks**	**120 Hours**
Unit 1: Businesses, Competition, and New Ideas	105	28 hours
Unit 2: Marketing	101, 103	26 hours
Unit 3 Part 1: Personal Saving and Borrowing	NA	4 hours
Unit 3 Part 2: Business Finance and Accounting	102, 207, 209, 206, 204, 203	22 hours
Unit 4: Management and Strategy	106	22 hours

660 - Microsoft Office	**Associated Tasks**	**120 Hours**
Unit 1: Hardware & the Internet	N/A	8 hours

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Unit 2: Word - Flyers, Letters, and Reports	304, 401, 502, 504, 1014	42 hours
Unit 3: Excel - Spreadsheets with Formulas and Charts	206. 209, 502. 504	42 hours
Unit 4: PowerPoint - Presentations with Themes and Graphics	403. 503, 504, 507, 1014	30 hours
Unit 5: Introduction to Simple Databases	707	8 hours

661- Management & Leadership	**Associated Tasks**	**120 Hours**
Unit 1- Course Policies, Expectations, and Procedures	NA	11 hours
Unit 2 - Planning & Organizing	503, 504, 507, 802, 803, 1504	30 hours
Unit 3 - Organizational Culture and Managing in a Global Environment	502, 805, 1502	14 hours
Unit 4 - Staffing & Directing	301, 302, 303, 304, 305, 306, 808	35 hours
Unit 5 - Customer Service	1101, 1103, 1104, 1105, 1107,	10 hours
Unit 6 - Leading	509, 801, 806, 807,	20 hours

662 - Advanced Microsoft Office	**Associated Tasks**	**120 Hours**
Unit 1: Word - Watermarking, Forms, Merge, Templates	304, 401, 502, 504, 1014	30 hours
Unit 2: Excel - Spreadsheets with Advanced Formulas	206. 209, 502. 504	40 hours hours
Unit 3: PowerPoint - Presentations with Embedded Elements	403. 503, 504, 507, 1014	25 hours

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Unit 4:Databases & Forms	707	25 hours

664 - School Store	**Associated Tasks**	**120 Hours**
Training	201, 202, 203, 204, 901	20 hours
Unit 1 - Market Information & Market Planning	103, 108, 401, 404, 507, 702, 703, 705, 706, 707, 802, 1501, 1502	13 hours
Unit 2 - Product Service Management, Pricing & Distribution	207, 504, 704, 803, 1201, 1202, 1503, 1504	15 hours
Unit 3 - Promotion, Selling & Financial Analysis	209, 306, 403, 502, 509, 1001, 1002, 1003, 1005, 1008, 1009, 1011, 1014	19 hours
Unit 4 - RISE UP Operations & Profit Certification	206, 307, 503, 805, 902, 903, 904, 905, 906, 907, 911, 912, 913, 914, 1101, 1103, 1104, 1105, 1015, 1016, 1107, 1111, 1203, 1204, 1205, 1206	53 hours

667 - Sports & Entertainment Marketing	**Associated Tasks**	**120 Hours**
Unit 1 - Course Policies, Expectations & Procedures	NA	7 hours
Unit 2- Fundamentals of Sports & Entertainment Marketing	101, 106, 305, 805,	12 hours
Unit 3- Product/Service Management	103, 1501, 1502, 1503, 1504	16 hours
Unit 4- Marketing Information Management	108, 504, 507, 508, 702, 703, 704, 705, 706, 707,	23 hours
Unit 5- Market Planning	105, 401, 404, 502, 503	5 hours
Unit 6- Pricing	206, 207,	7 hours

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Unit 7- Advertising	403, 904, 1003, 1004, 1005, 1008, 1009, 1011, 1014,	28 hours
Unit 8- Publicity & Public Relations	306, 802, 803,	12 hours
Unit 9- Sales Promotion	905, 1001, 1002,	5 hours
Unit 10- Event Scheduling	1404	5 hours

668 - Entrepreneurship	**Associated Tasks**	**120 Hours**
Unit 1- Course Policies, Expectations, and Procedures	101, 205, etc.	5 hours
Unit 2- Entrepreneurship Basics	101, 102, 103, 105, 503, 509,	28 hours
Unit 3- Generating Ideas	305, 805, 1107, 1108, 1402, 1403, 1404, 1407, 1408, 1409, 1501, 1502, 1503, 1504,	24 hours
Unit 4- Determining Feasibility	109, 404,	9 hours
Unit 5- Establishing your Business	306, 401,504, 806, 1011, 1103, 1004, 1005,	7 hours
Unit 6- Determining a Mission	502,	4 hours
Unit 7- Market Planning	108, 507, 702, 703, 704, 705,	16 hours
Unit 8- Product/Service Management	802, 803,	2 hours
Unit 9- Channel Management	1201, 1202	4 hours
Unit 10- Pricing	206, 207,	6 hours
Unit 11- Promotion	403, 1001, 1002, 1003, 1004, 1005, 1008, 1009, 1011, 1014,	15 hours

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685 - Business & Marketing Essentials/DECA	**Associated Tasks**	**120 Hours**
Unit 1&2 - Course Expectations & Intro to DECA	305	16 hours
Unit 3 - Business Communications	306, 502, 503, 504, 509, 1001, 1002, 1003, 1103,	14 hours
Unit 4 - Business & Ethics	704, 805, 1011, 1014,	9 hours
Unit 5 - Economics	102, 106, 404, 1101, 1402, 1403, 1404, 1407,	8 hours
Unit 6 - Marketing	101, 103,105, 108, 401, 507, 702, 703, 704, 706, 707, 1004, 1005, 1008, 1009,1502,	24 hours
Unit 7 - Entrepreneurship	201, 206, 207, 801, 1104, 1201, 1202, 1504	14 hours
Unit 8 - Hospitality & Tourism	403, 901, 902, 903, 904, 905,	20 hours
Unit 9 - Leadership & Project Management	1105, 1107, 1111	15 hours

686 - Social Media in Business and Society	**Associated Tasks**	**120 Hours**
Unit 1- Introduction to Social Media Marketing	802, 805,	5 hours
Unit 2- Social Media Marketing Strategy	404, 503, 504, 803, 1015, 1502, 1504, 1606,	13 hours
Unit 3- Develop Your Personal Brand	509, 1604,	13 hours
Unit 4- Marketing with TikTok	1016, 1601, 1603, 1605,	9 hours
Unit 5- Marketing with Snapchat	1016, 1601, 1603, 1605	9 hours
Unit 6- Marketing with Facebook & Instagram	1016, 1601, 1603, 1605	9 hours
Unit 7- Marketing with YouTube	1016, 1601, 1603, 1605	9 hours
Unit 8- Marketing with Twitter & Pinterest	1016, 1601, 1603, 1605	5 hours
Unit 9- Marketing with LinkedIn	1016, 1601, 1603, 1605	5 hours

PACING GUIDE

Unit 10- Blogs, Vlogs, Podcasts, Webinars	1016, 1601, 1603, 1605	13 hours
Unit 11- Social Media Marketing Campaign	502, 507,	9 hours
Unit 12- Influencer Marketing with Social Media	1016, 1601, 1603, 1605	9 hours
Unit 13- Social Media Analytics & Measuring ROI	703, 1601, 1602	9 hours

Task List (Update from KUD Spreadsheet)

Competency Task List –
Secondary Component

Sales, Distribution & Marketing Operations, General CIP 52.1801

High School Graduation Years 2025, 2026, 2027

100 Interpreting Marketing and Business Fundamentals

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
101	Explain the seven functions of marketing.	Bus & Mktg Essentials Sports & Entrmt Mktg Entrepreneurship I	Interpreting Marketing & Business Fundamentals-Marketing Functions: market planning, product and service management, distribution, pricing, promotion, selling, marketing-information management, financing, risk management	Marketing, and its various functions, are an important part of most businesses and organizations	Identify and explain the various functions of marketing. Perform the various functions of marketing.	9 Functions Quiz Powder Puff Commercial Sandwich Shop Project
102	Explain economic utilities.	Bus & Mktg Essentials Entrepreneurship I	Interpreting Marketing & Business Fundamentals-Economic Utilities: form utility, time utility, place utility, possession utility	Marketers use utility to increase customer satisfaction	Explain how marketers use utility to increase customer satisfaction.	Superbowl City Pitch Sandwich Shop Project
103	Explain the (4 P's) of the marketing mix.	Bus & Mktg Essentials School Store Entrepreneurship I Sports & Entrmt Mktg	Interpreting Marketing & Business Fundamentals-Marketing Mix: product, price, place, promotion, and people	Effective marketing strategies combine all parts of the marketing mix to satisfy customers	Explain the components of the marketing mix. Create a marketing mix.	Superbowl City Pitch Food Truck Project Sandwich Shop Project 4 P's
	RESERVED (104)	-				

105	Explain the role of marketing and business in society.	Bus & Mktg Essentials Sports & Entrmt Mktg Entrepreneurship I	Interpreting Marketing & Business Fundamentals-Society Role of Marketing and Business: production, management, accounting/finance, operations	Society benefits significantly from marketing and business	Explain the role of marketing and business in society.	Superbowl City Pitch Powder Puff Commercial Sandwich Shop Project
106	Assess global trends in the marketplace.	Bus & Mktg Essentials Sports & Entrmt Mktg Entrepreneurship I	Interpreting Marketing & Business Fundamentals-Global Trends: environmental scanning, internal environment, external environment	Business and organizations must scan internal and external environments and adapt as necessary or risk failure	Assess environmental scans. Conduct environmental scans-internal and external.	Superbowl City Pitch Powder Puff Commercial Sandwich Shop Project
	RESERVED (107)	-				
108	Explain the concepts of market segmentation and target marketing.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Interpreting Marketing & Business Fundamentals-Target Marketing and Market Segmentation: target market, market segment/segmentation, geographic, demographic, psychographic, behavioral/product usage, benefit, mass marketing	Market segmentation benefits both business and consumers by allowing for a more focused business strategy	Explain target marketing and market segmentation. Create customer profiles as part of a marketing strategy.	Superbowl City Pitch Powder Puff Commercial Sandwich Shop Project
109	Conduct a strengths, weaknesses, opportunities, and threats (SWOT) analysis.	Entrepreneurship I	Interpreting Marketing & Business Fundamentals-SWOT Analysis: market analysis, strengths, weaknesses, opportunities, threats	Analyzing the strengths, weaknesses, opportunities, and threats of a business helps to develop an effective marketing strategy	Conduct a SWOT analysis. Use a SWOT analysis to assist in the creation of a marketing strategy.	Business Plan SWOT

200 Pricing and Retail Math

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
201	Process sales documentation and employee records for a business.	**Bus & Mktg Essentials** **School Store** **Microsoft Office** **Advanced Microsoft Office**	Pricing & Retail Math-Sales Documentation and Employee Records: operations manual, professional selling	Accuracy in sales documentation and employee records is essential in empowering and recognizing employees leading to successful store operations, outstanding customer service, increased sales, and ultimately, business success	Process sales documentation and employee records.	Food Truck Challenge RISE Knowledge Check 2
202	Calculate correct change for a customer transaction.	School Store	Pricing & Retail Math-Calculate Correct Change: making change, count-forward method, manual method	The correct handling of cash affects the store's bottom line.	Calculate correct change for customer transactions.	RISE Knowledge Check 2
203	Calculate sales tax and discounts.	School Store	Pricing & Retail Math-Calculate Sales Tax and Discounts: Pennsylvania sales tax, taxable items, non-taxable items, markdowns, discounts, coupons	The correct handling of cash and payment affects the store's bottom line.	Calculate sales tax and discounts.	RISE Knowledge Check 2
204	Perform an opening/closing reconciliation of a cash drawer.	**School Store** **Microsoft Office** **Advanced Microsoft Office**	Pricing & Retail Math-Open/Close Cash Register: opening procedures, closing procedures, petty cash, point-of-sale, summary report	The correct handling of cash and payment affects the store's bottom line.	Perform open/closing reconciliation of a cash drawer.	RISE Knowledge Check 2
	RESERVED (205)	-				

206	Calculate profit/ loss, profit margins, and markdown.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship	Pricing & Retail Math-Profit, Markup, and Markdown: determine objectives, study costs, estimate demand, study competition, select strategy, markup, cost-oriented pricing, demand-oriented pricing, competition-oriented pricing	Profit margins play an important role in any business in providing value to the customer and maximizing profits.	Calculate profit, markup, and markdown.	Food Truck Challenge Marketing Plan Presentation Sandwich Shotp Project
207	Calculate prices for merchandise using pricing strategies.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship	Pricing & Retail Math-Pricing Strategies: odd-even, pricing, multiple pricing, promotional pricing, penetration pricing, prestige pricing, price skimming, multiple unit pricing, loss-leader pricing, special event pricing, everyday low pricing	Pricing strategies play an important role in any business in providing value to the customer and maximizing profits.	Calculate prices for merchandise using a variety of pricing strategies.	Food Truck Challenge Marketing Plan Presentation Sandwich Shotp Project
	RESERVED (208)	-				
209	Calculate wages, taxes, and deductions.	School Store Microsoft Office Advanced Microsoft Office	Pricing & Retail Math-Wages, Taxes, and Deductions: gross pay, net pay, payroll taxes, federal income taxes, state income taxes, local income taxes, deductions, insurance premiums retirement contributions	How are employees paid and taxes deducted.	Calculate wages, taxes, and deductions.	RISE Knowledge Check 2

300 Exploring Career Development Opportunities

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment

301	Prepare a résumé for a specific job in marketing or business.	Mgmt & Leadership Financial/Career Literacy	Explore Career Development Opportunities- Networking: professional communication, relationship management, professionalism	Networking is a vital component in professional growth and involves reaching out to individuals and/or organizations to aid you professionally.	Demonstrate professional networking stills.	Resume Workshop
302	Prepare a cover letter for a specific job in the field of marketing or business.	Mgmt & Leadership Financial/Career Literacy	Explore Career Development Opportunities- adaptability, collaboration, leadership, problem-solving, communication, time management, initiative, attention to detail, teamwork, professionalism	Interviews serve as a bridge between candidates and employers, allowing them to assess each other and make informed choices for jobs, college admission, or other opportunities making it essential for success.	Demonstrate how to successfully interview.	Resume Workshop
303	Complete a job application for a specific job in the field of marketing or business.	Mgmt & Leadership Microsoft Office Advanced Microsoft Office Financial/Career Literacy	Explore Career Development Opportunities- Job Application: application, personal information, position availability, education, employment history, references	Job applications are official, consistent forms potential employers ask applicants to complete to learn about a candidate's work history	Complete an application for a job in the marketing or business industry.	Resume Workshop
304	Prepare for a job interview in the field of marketing or business.	Mgmt & Leadership Financial/Career Literacy	Explore Career Development Opportunities- Job Interview: preparation, professional dress, body language, opening, rapport building, questioning, closing, follow-up	Interviews are a professional conversation with a potential employer to determine a mutual fit. Candidates are seeking a job offer. Potential employers are seeking to learn the skills, ability, and knowledge, personality, character, and interests of a	Prepare for an interview for a job in the marketing or business industry. Participate in a mock interview event.	Resume Workshop

				candidate.		
305	Research career and educational opportunities in marketing or business.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **Mgmt & Leadership** **Entrepreneurship I** **Financial/Career Literacy**	Explore Career Development Opportunities- Marketing & Business Job Opportunities: career description, duties & responsibilities, traits, technical skills, leadership skills, educational requirements, coursework, post-secondary schooling, advancement opportunities, and professional development	Numerous career opportunities exist in the field of marketing and business as entry-level employment and in advanced educational experiences.	Research the various job opportunities in the field of marketing or business.	Leave Your Mark Fantasy Dream Team Business Plan
306	Develop a network of contacts.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store** **Mgmt & Leadership** **Entrepreneurship I**	Explore Career Development Opportunities- Networking: professional communication, relationship management, professionalism	Networking is a vital component in professional growth and involves reaching out to individuals and/or organizations to aid you professionally.	Demonstrate professional networking stills.	Leave Your Mark Fantasy Dream Team Business Plan
307	Participate in a job interview.	School Store Financial/Career Literacy	Explore Career Development Opportunities- adaptability, collaboration, leadership, problem-solving, communication, time management, initiative, attention to detail, teamwork, professionalism	Interviews serve as a bridge between candidates and employers, allowing them to assess each other and make informed choices for jobs, college admission, or other opportunities making it essential for success.	Demonstrate how to successfully interview.	RISE Certification Common Interview

400 Technology Applications

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
401	Prepare marketing and business documents.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Microsoft Office Advanced Microsoft Office Entrepreneurship I	Technology Applications-Marketing Documents: advertising cards, billboards, business cards, email, fliers, funnel pages, giveaway boxes, mailing campaigns, newspaper advertisement, promotional items, social media channels, video productions, websites, window displays, yard signs	Various documents are created and used in the marketing industry.	Prepare various types of marketing documents.	
	RESERVED (402)	-				
403	Create projects using multimedia sources and applications.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Microsoft Office Advanced Microsoft Office Entrepreneurship I	Technology Applications-Multimedia Applications: videos, images, audio, presentation, podcasting, web media	Various multimedia applications are used in marketing.	Create projects using multimedia sources and applications.	
404	Apply Research trends in marketing technology.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I Social Media	Technology Applications-Marketing Technology: (topics updated each year) artificial intelligence, programmatic advertising, conversational marketing, chatbots, personalization, video marketing, social media messaging, social media stories, push notifications, social	Trends in marketing technology change frequently and should be considered in marketing strategies.	Research the new trends in marketing technology.	

			commerce. VR, live stream shopping			

500 Communications in Marketing

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
	RESERVED (501)	-				
502	Use professional communication skills.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Mgmt & Leadership Microsoft Office Advanced Microsoft Office Entrepreneurship I Social Media	Communications in Marketing- Communication Skills: audience, persuasion, authenticity, engagement, nonverbal, verbal, visual, active listening, collaboration, feedback, public speaking	Effective communication is essential in managing relationship with staff, customers, and stakeholders. Failure to communicate effectively can result in poor relationships, poor reputation, and potentially lost sales.	Use professional communication skills. Send appropriate emails. Make professional phone calls.	
503	Read and comprehend written business communications.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Mgmt & Leadership Microsoft Office Advanced Microsoft Office Entrepreneurship I Social Media	Communications in Marketing- Read & Comprehend Business Communications: accuracy interpretation, analysis	Effective communication is essential in managing relationship with staff, customers, and stakeholders. Failure to communicate effectively can result in poor relationships, poor reputation, and potentially lost sales.	Read and comprehend business communication.	

504	Create a variety of written business communications utilized in the workplace.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store Mgmt & Leadership** **Microsoft Office Advanced** **Microsoft Office** **Entrepreneurship I** **Social Media**	Communications in Marketing- Written Business Communications: clarity, correctness, conciseness, courtesy, concreteness, consideration, completeness	Effective written communication is essential in managing relationship with staff, customers, and stakeholders. Failure to communicate effectively can result in poor relationships, poor reputation, and potentially lost sales.	Create written business communication.	
	RESERVED (505-506)	-				
507	Deliver a marketing related presentation.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store Mgmt & Leadership** **Microsoft Office Advanced** **Microsoft Office** **Entrepreneurship I** **Social Media**	Communications in Marketing- Marketing Presentation: visual, clarity, correctness, conciseness, courtesy, concreteness, consideration, completeness	Effective communication when presenting is essential in managing relationship with staff, customers, and stakeholders. Failure to communicate effectively can result in poor relationships, poor reputation, and potentially lost sales.	Prepare and deliver a marketing related presentation.	
	RESERVED (508)	-				
509	Recognize and respond effectively to nonverbal communication in the business environment.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store Mgmt & Leadership** **Microsoft Office Advanced** **Microsoft Office**	Communications in Marketing- Nonverbal Communication: body language, facial expressions, gestures, created space	Effective non-verbal communication is essential in managing relationship with staff, customers, and stakeholders. Failure to communicate effectively can result in poor relationships, poor	Interpret nonverbal communication in business.	

		Entrepreneurship I Social Media		reputation, and potentially lost sales.		

600 Reserved

700 Marketing Information Management and Market Planning

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
	RESERVED (701)	-				
702	Identify and define methods of conducting marketing research.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Marketing Information Management & Market Planning- Marketing Research: primary data, survey, close-ended questions, open-ended questions, focus group, observations, experiments, test markets, simulations, secondary data, internal information, reports, performance information, external information, government reports, trade and professional associations, business publications, comercial data and information services	A well-organized and efficient marketing information system (MkIS) provides the information needed to make regular, one-time, and new decisions for a business and include various methods to seek that information.	Define the methods used to conduct marketing research.	

703	Conduct marketing research.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store** **Microsoft Office Advanced** **Microsoft Office** **Entreprenuership I** **Social Media**	Marketing Information Management & Market Planning- Conducting Marketing Research: problem identification, situation analysis, participant selection, data collection, data analysis, result preparation and presentation	A well-organized and efficient marketing information system (MkIS) provides the information needed to make regular, one-time, and new decisions for a business and include various methods to seek that information.	Define the methods used to conduct marketing research.	
704	Explain and/or use technology in customer relationship management.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store** **Entrepreneurship I**	Marketing Information Management & Market Planning- Technology in CRM: customer-relationship management, target market, individual customer sales records, product requests, returns, adn new market opportunities	Tracking customers by reviewing sales records, product requests, returns, and new market opportunities for target and individual customers improve the effectiveness of the exchange process between a business and its customers.	Explain the various ways in which technology can be used in customer relationship management.	
705	Compare primary and secondary marketing research data.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store** **Entrepreneurship I**	Marketing Information Management & Market Planning- Compare Primary and Secondary Research: primary data, survey, close-ended questions, open-ended questions, focus group, observations, experiments, test markets, simulations, secondary data, internal information, reports, performance information, external information, government reports, trade and professional associations, business	Information from primary and secondary data sources is designed to help make regular, one-time, and new decisions for a business and include various methods to seek that information.	Compare primary and secondary marketing data.	

			publications, comercial data and information services			
706	Collect marketing research data to make recommendations and decisions.	School Store	Marketing Information Management & Market Planning- Collect Primary and Secondary Research: problem identification, situation analysis, participant selection, data collection, data analysis, result preparation and presentation	Information from primary and secondary data sources is designed to help make regular, one-time, and new decisions for a business and include various methods to seek that information.	Collect, analyze, and make recommendations using marketing data.	
707	Explain the importance of marketing information management.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store** **Entrepreneurship I**	Marketing Information Management & Market Planning- Marketing-Information Management: marketing research, primary data, secondary data, population, sample, random sampling	A well-organized and efficient marketing information system (MkIS) provides the information needed to make regular, one-time, and new decisions for a business and include various methods to seek that information.	Explain the function of marketing-information management.	

800 Business Management and Administration

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
801	Identify and compare the different forms of business ownership.	**Bus & Mktg Essentials** **Mgmt & Leadership**	Business Management & Administration- Business Ownership: franchise, existing business, family business, sole proprietorship, partnership, corporation, S Corporation,	Selecting an appropriate form of business ownership is an essential step in early business formation.	Identify the pros and cons of various forms of business ownership.	

			Limited Liability Company (LLC)			
802	Identify safety concerns in the marketing and business industries.	**Sports & Entrmt Mktg** **School Store Mgmt & Leadership** **Entrepreneurship I** **Social Media**	Business Management & Administration- Safety Concerns: distribution-(products, buildings, equipment, marketing)-(recognition, prevention, awareness, policies), insurance	Marketers consider safety risks for each marketing mix element to assist in decision making and help a business be obtain success.	Identify safety concerns in marketing and business.	
803	Examine and make recommendations based on risk management scenarios.	**Sports & Entrmt Mktg** **School Store Mgmt & Leadership** **Entrepreneurship I** **Social Media**	Business Management & Administration- Risk Management:	Providing security and safety for products, personnel, and customers and reducing the risk associated with marketing decisions and activities is essential for business success.	Analyze the nature of risk management.	
	RESERVED (804)	-				
805	Explain business ethics.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store Mgmt & Leadership** **Entrepreneurship I** **Social Media**	Business Management & Administration- Business Ethics: ethics, code of ethics, social responsibility marketer responsibilities as it pertains to product development and management, promotions, distribution, pricing, and marketing research	Marketers should operate ethically and consider the influence a company has on society, culture, and environment in which it does business.	Explain business ethics.	
806	Identify levels of management.	Mgmt & Leadership	Business Management & Administration- Management Levels: top management, middle management, first-line management, financial	Management structure and responsibility inside a company must be understood as an employee and to those aspiring for a leadership	Identify the different management levels.	

			manager, operations manager, marketing manager, human resource manager, administrative manager	role.		
807	Demonstrate leadership within a team environment.	Mgmt & Leadership	Business Management & Administration- Leadership Qualities: conceptual skills, analytic skills, interpersonal skills, technical skills, communication skills	Aspiring leaders and managers should develop and practice variety of skills including conceptional, analytic, interpersonal, technical, and communication skills.	Identify leadership qualities. Demonstrate and develop leadership qualities.	
808	Identify the different tasks associated with the levels of management, e.g., interviewing, hiring, firing, promoting, training.	Mgmt & Leadership	Business Management & Administration- Management Levels: interviewing, hiring, firing, promoting, advancing	Managers make key personnel decisions including the interviewing, hiring of new employees and the firing, promoting, and advancing of current employees.	Identify tasks associated with the levels of management. Perform tasks associated with levels of management.	

900 Selling Goods and Services

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
901	Identify the steps of a sale.	**Bus & Mktg Essentials** **School Store**	Selling Goods & Services- Steps of a Sale: prepare for the sale, greet customer, determine needs, present products/services, handle questions and objections, close the sale, suggestion selling, follow up	To optimize selling, the professional selling process should be used by salespeople to directly interact with customers & encourage them to purchase a company's products or services.	Explain the selling process.	

902	Greet and approach a customer.	**Bus & Mktg Essentials** **School Store**	Selling Goods & Services-Greeting/Approaching Customer: greeting approach, merchandise approach, service approach	A general greeting (hello), merchandise approach (talk about product or service), or service approach (how can I help you) can be used with a customer to begin the selling process.	Demonstrate greeting and approaching a customer.	
903	Create probing questions to determine customer needs and wants.	**Bus & Mktg Essentials** **School Store**	Selling Goods & Services-Probing Questions: question, listen, observe	An important step in the Professional Selling Process is to ask probing questions of the customer, listen to responses, and observe reactions before presenting product options.	Create questions to help determine customer needs.	
904	Perform feature-benefit selling.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store**	Selling Goods & Services-Feature-Benefit Selling: features, benefits	Salespeople should know the features of their products/services but convert them to benefits, specifically show how a product/service solve a problem.	Demonstrate feature-benefit selling.	
905	Perform suggestive selling techniques.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store**	Selling Goods & Services-Suggestion Selling: add-ons, cross-selling, upselling, complementary item	Salespeople should know the effectiveness of suggestion selling as a customer purchasing a product is likely to willingly purchase a complementary item(s) resulting in increased sales.	Demonstrate suggestion selling.	

906	Close a customer sale.	**School Store**	Selling Goods & Services-Close a Sale: close, follow up	A sale does not close until the customer confirms the desire to purchase a product or service and an essential follow up (phone call, email, etc) creates customers for life.	Effectively close a customer sale.	
907	Perform a sales presentation for a good or service.	**School Store**	Selling Goods & Services-Sales Presentations: pitch, introduction, problem identification, solution of product/service, data backup, questions	Sales presentations are essential pitches which allows a salesperson to introduce themselves and provide a solution to a problem backed with data. The presentation should also provide the opportunity for customers to ask questions and receive quality resoposes.	Give a sales presentation for a good or service.	
	RESERVED (908-910)	**-**				
911	Interpret company policies for customers.	**School Store**	Selling Goods & Services-Company Policies: product/service/company knowledge, policies, operations manual	During the first step of the Professional Selling Process, salespeople should familiarize themselves with all company policies so they can be accurately communicated to the customer.	Interpret company policies for customers.	
912	Handle sales objections.	**School Store**	Selling Goods & Services-Handling Sales Objections: product/service knowledge	Providing an opportunity for questions and objections and having a knowledgeable	Demonstrate handling sales objections.	

				response helps to close a sale.		
913	Establish and maintain long-term customer relationships.	**School Store**	Selling Goods & Services-Long-term Customer Relationships: follow up	The follow-up process (email, phone call, informal interaction in store) can help to create customers for life.	Identify strategies to establish and maintain long-term customer relationships.	
914	Create a customer profile.	**School Store**	Selling Goods & Services-Customer Profile: demographics, geographics, psychographics, behavior-based, preferred channels	While preparing for the sale during the Professional Selling Process, salespeople should be knowledge of their customers through the creation of customer profiles.	Create a customer profile.	

1000 Advertising and Promoting Goods and Services

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1001	Explain the goals and benefits of promotion.	**Bus & Mktg Essentials** **Sports & Entrmt Mktg** **School Store** **Entrepreneurship I**	Advertising & Promoting Goods & Services-Promotion: promotion, promotional mix, advertising, direct marketing, sales promotion, professional selling, PR	Promotion is an essential element of the Marketing Mix and a primary function of marketing where a company's good/service is effectively communicated to customers/potential customers through a variety of methods.	Explain the importance of promotion.	

1002	Design projects that utilize principles of visual merchandising.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Advertising & Promoting Goods & Services- Visual Merchandising: visual merchandising, display, promotional display, institutional display, decorative props, open display, closed display	Visual merchandising ties the store image components together and different display styles are more effective for particular types of merchandise.	Create projects that implement visual merchandising principles.	
1003	Compare and contrast different types of advertising media.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Advertising & Promoting Goods & Services- Advertising Media: internet, TV, radio, newspapers, magazines, billboards	A variety of advertising media (paid) types are available to reach a customer base.	Compare different types of advertising media.	
1004	Create a promotional mix for a product or service.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Advertising & Promoting Goods & Services- Promotional Mix: advertising, direct marketing, sales promotion, professional selling, PR	A combination of advertising, direct marketing, sales promotion, professional selling and PR is needed to reach an intended market and reach promotional goals all with a uniform theme and message.	Create a promotional mix.	
1005	Identify the major elements of a print advertisement.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Advertising & Promoting Goods & Services- Print Advertisements: dominate headline, dominate design element, simple layout, complete & specific information, distinct visuals, business name/website	Effective print advertisements include a unique, dominate headline and image, are simple in their layout, and provide complete information.	Identify the major elements of print advertisements. Create print advertisements.	
	RESERVED (1006-1007)	-				

1008	Create advertising slogans.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Advertising & Promoting Goods & Services-Advertising Slogans: rhyme, recognizable, target market, timeliness, uniqueness, consistent, catchy	Effective advertising slogans typically have identifying elements, are timeliness, and make the brand easily recognizable.	Evaluate advertising slogans. Write advertising slogans.	
1009	Differentiate between promotional advertising and institutional advertising.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Advertising & Promoting Goods & Services-Promotional Advertising vs. Institutional Advertising: Promotional advertising, institutional advertising	Promotional advertising promotes a specific product(s) or service(s) while institutional advertising promotes the company as a whole.	Determine the difference between promotional advertising and institutional advertising.	
	RESERVED (1010)	-				
1011	Distinguish between advertising and publicity.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Advertising & Promoting Goods & Services-Advertising vs. Publicity: advertising, publicity	Advertising is a paid form of communication to a customer where publicity is an unpaid mention of a company/product/services by an outside source, typically news media. Both are essential components of the promotional mix.	Determine the differences between advertising and publicity.	
	RESERVED (1012-1013)	-				
1014	Create a promotional project.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Advertising & Promoting Goods & Services-Promotional Project: promotional plan, target market, objectives, budget, promotional mix	In a promotional project, the marketer researches and analyzes the market, selects the target market, identifies promotional objectives, sets a promotional budget, develops a	Create a promotional project.	

				promotional mix, implements the plan and evaluates the results.		
1015	Identify and evaluate different sales promotion techniques.	Social Media & Marketing	Advertising & Promoting Goods & Services- Sales Promotion Techniques: sales promotion, short-term incentive, price promotions- sales, coupons, rebates, limited-time models, free product features, add-ons, giveaways- sweepstakes, contests, free product samples	As part of the promotional mix, sales promotion techniques are used to provide a short-term incentive for customers to make a purchase.	Evaluate different sales promotion techniques.	
1016	Identify the major elements of online advertising.	Social Media & Marketing	Advertising & Promoting Goods & Services- Online Advertising: search engine optimization, pay-per-click, social media marketing, content marketing, email marketing, mobile marketing, marketing analytics, affiliate marketing	In today's society, the internet is used frequently, sometimes exclusively, in promotion of a product/service/company.	Identify the major elements of online advertising. Create online advertisements.	

1100 Providing Personalized Customer Service

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment

1101	Describe the benefits of customer service.	Bus & Mktg Essentials School Store Mgmt & Leadership Entrepreneurship I	Providing Personalized Customer Service- Customer Service: customer service, customer survey, word of mouth communication	Strong customer service is good for the business in maintaining a positive environment, good for the customer in making sure they are happy/return, and good for the employee as it gives them control of the situation. Customer service should meet and exceed expectations.	Explain the benefits of strong customer service.	
	RESERVED (1102)	Bus & Mktg Essentials School Store Mgmt & Leadership Entrepreneurship I				
1103	Demonstrate positive communicate with customers.	Bus & Mktg Essentials School Store Mgmt & Leadership Entrepreneurship I	Providing Personalized Customer Service- Communicating w/ Customers: professionalism, rapport building, active listening, policies, disputes/problems	Understanding how customer expectations affect the perception of customer service will help retailers provide appropriate levels of customer service.	Demonstrate appropriate communication with customers.	
1104	Develop a rapport with customers.	Bus & Mktg Essentials School Store Mgmt & Leadership Entrepreneurship I	Providing Personalized Customer Service- Customer Rapport: rapport, audience	Understanding how customer expectations affect the perception of customer service will help retailers provide appropriate levels of customer service.	Demonstrate rapport building with customers.	
1105	Solve customer problems.	Bus & Mktg Essentials School Store	Providing Personalized Customer Service- Customer Problems: slow,	Responding appropriately to customer problems is	Demonstrate how to solve customer problems.	

		Mgmt & Leadership Entrepreneurship I	suspicious, dishonest	important- even if the customer is wrong, they are the reason the business exists.		
	RESERVED (1106)	-				
1107	Manage and solve difficult scenarios with consumers.	Bus & Mktg Essentials School Store Mgmt & Leadership Entrepreneurship I	Providing Personalized Customer Service- Difficult Customers: Disagreeable, domineering, suspicious, slow, dishonest	Understanding how customer expectations affect the perception of customer service will help retailers provide appropriate levels of customer service.	Demonstrate appropriate ways to approach a difficult customer.	
	RESERVED (1108-1110)	-				
1111	Develop a customer service policy.	Bus & Mktg Essentials School Store Entrepreneurship I	Providing Personalized Customer Service- Customer Service Policy Statement: customer service policy	Developing a clear, concise, positive, honest, fair, and realistic customer service policy is essential and should be shared with staff and customers.	Create and implement a customer service policy statement.	

1200 Channel Management

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1201	Explain channels of distribution.	Bus & Mktg Essentials School Store Entrepreneurship I	Channel Management- Channels of Distribution: direct channel, indirect channel, channel captain	Channels of distribution are developed to perform many of the marketing functions that must be accomplished any time an exchange takes place with a final consumer.	Explain the various channels of distribution.	

1202	Determine a channel of distribution for a product.	Bus & Mktg Essentials School Store Entrepreneurship I	Channel Management-Determine Channel of Distribution: producers, retailers, consumers	The use of other businesses improves the efficiency and effectiveness of the exchange process between a producer and its consumers.	Select the appropriate channel of distribution for a product.	
1203	Identify various inventory control management systems.	School Store	Channel Management-Inventory Control Management: order processing, inventory control, stock turnover	Physical distribution systems assure that supply matches demand.	Evaluate various inventory control management systems for pros and cons.	
1204	Describe the basic steps in receiving and inspecting merchandise.	School Store	Channel Management-Receiving and Inspecting Merchandise: receiving, purchase order, invoice, packing slip	Receiving merchandise properly ensures the the right merchandise and quantities are in stock.	Explain how to receive and inspect merchandise. Receive and inspect merchandise.	
1205	Explain the elements of purchasing.	School Store	Channel Management-Elements of Purchasing: merchandise plan, planned sales, planned stock, planned reductions, planned purchases	Creating a plan for purchasing helps to meet inventory and sales goals.	Explain the elements of purchasing. Purchase product.	
1206	Describe the different types of inventory control management systems.	School Store	Channel Management-Inventory Control Management System: physical inventory system, visual inventory, annual inventory, perpetual inventory system	Inventory control ensures proper merchandise levels to help a retail business reach its sales goals.	Implement an inventory management system.	

1300 Reserved

1400 Economics

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
	RESERVED (1401)	-				
1402	Describe economic goods and services.	Bus & Mktg Essentials Entrepreneurship I	Economics- Goods and Services: goods, services	Goods and services satisfy wants and needs of consumers and businesses must determine what and how much to produce.	Differentiate between goods and services.	
1403	Examine economic resources.	Bus & Mktg Essentials Entrepreneurship I	Economics- Economic Resources: factors of production, land and natural resources, labor, capital, entrepreneurship	Factors of production are the economic resources necessary to produce goods and services.	Examine economic resources.	
1404	Examine supply and demand factors.	Bus & Mktg Essentials Sports & Entrmt Mktg Entrepreneurship I	Economics- Supply and Demand Factors: supply, demand, market price	Together, supply and demand determine the price of goods/services available in a given market.	Explain the factors related to supply and demand.	
	RESERVED (1405-1406)	Entrepreneurship I				
1407	Compare and contrast types of economic systems.	Entrepreneurship I	Economics- Economic Systems: economics, microeconomics, macroeconomics, economy, capitalism, market economy, capitalism, mixed economy, consumer products, command economy, socialism. communism	Wealth is created and distributed differently in various types of economic systems.	Compare the different types of economic systems.	

1408	Determine the impact of the business cycle on business activities.	Entrepreneurship I	Economics- Impact of Business Cycle: business cycle, recession, depression, monetary policies, fiscal policies,federal deficit, national debt	The Business Cycle is used to forecast the direction of the economy, and therefore, business decisions.	Evaluate various components of a business cycle on activities.	
1409	Identify economic measurements.	Entrepreneurship I	Economics- Economic Measurements: productivity, Gross Domestic Product (GDP), inflation, deflation, unemployment rate, consumer price index, producer price index	Economic measures are used to gauge the economic health of the nation and influence business decisions.	Identify elements to measure the economy.	

1500 Product/Service Management

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1501	Identify the difference between national and private brands.	Sports & Entrmt Mktg School Store Entrepreneurship I	Product/Service Management- National vs. Private Brands: national brand, private (store) brand	Both national brands (prominent/established products) and private/store brands are sold by retailers and have their advantages.	Distinguish between a national brand and a private brand.	
1502	Explain product/service branding.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Mgmt & Leadership Entrepreneurship I Social Media	Product/Service Management- Product/Service Branding: brand, brand development, trademark, brand loyalty, logo, slogan, colors, identifying elements, non-recognition,	Brands help customers make choices and are effective in establishing brand loyalty.	Explain product/service branding. Develop a brand for a product/service.	

			recognition, preference, insistence, licensed brand			
1503	Identify the elements of branding and packaging.	Bus & Mktg Essentials Sports & Entrmt Mktg School Store Entrepreneurship I	Product/Service Management- Branding and Packaging: packaging, ease of use, safety, attraction, handling, environment	Packaging offers satisfaction to the customer and helps to attract buyers/provides uniqueness.	Identify the elements of branding and packing. Create a brand and package.	
1504	Develop strategies to position a product/business.	Sports & Entrmt Mktg School Store Mgmt & Leadership Entrepreneurship I Social Media	Product/Service Management- Positioning a Product/Business: market position, attribute, price, quality, use/application, user, classification, competitor	A company's product should have a unique image that appeals to consumers and differs from competitors' products.	Develop a strategy to position a product/business.	

1600 Social Media

Item	Task	Secondary Course Crosswalk	Know	Understand	Do	Assessment
1601	Distinguish the different types of social media.	Social Media	Social Media- Types of Social Media: Facebook, Instagram, Twitter, Snapchat, Pinterest, YouTube, TikTok, LinkedIn	Different types of social media channels exist and have various costs and benefits for use in business and personal realms.	Explain the different types of social media.	
1602	Compare various social media platforms as a marketing tool.	Social Media	Social Media- Social Media Platforms: goals, objectives, metrics, content strategy	Select the best tool to create effective messages for an intended audience.	Compare the effectiveness of various social media platforms based upon intended goal and audience.	

1603	Design content for different social media platforms.	Social Media	Social Media- Design Social Media Content: target market, personas, audit, goals, objectives, metrics, resources, roles, responsibilities, tone of voice, platform, distribution strategy, content strategy, content calendar, scheduling posts, track, analyze, tune, advertising strategy	Designing effective social media content is essential to reach customers and potential customers.	Create social media content for various platforms.	
1604	Develop a personal brand.	Social Media	Social Media- Personal Brand: audit, develop, etiquette, consistency, personality, values, theme	A personal brand is a way to market yourself and your professional accomplishments by sharing your values, have a consistent theme, and highlight uniqueness.	Create and maintain a personal brand.	
1605	Demonstrate professionalism while using social media platforms.	Social Media	Social Media- professionalism, social media etiquette	Maintaining a professional presence and interactions on social media is essential to a positive, interactive, and healthy social environment.	Demonstrate professionalism when using social media.	
1606	Distinguish between paid, owned and earned media.	Social Media	Social Media- paid media, owned media, earned media	Distinguishing between paid, owned, and earned media helps digital marketers to develop a balanced media strategy to engage and retain customers effectively.	Develop and recognize the difference between paid, owned, and earned media.	

Dover Area School District
Bus Driver Employee List

Employee Name

ASHLEY ABERNETHY
MARK ALBRIGHT
DEVIN ALDINGER (SNELL)
IMAM-MUSTAFA ALI
TANYA ALI
BILLIE JO ANDERSON
AMBER BAUBLITZ
KAREN BAUGHMAN
SCOTT BAUMGARDNER
LINDA BEARD
NADINE BECKER
LYNSEY BELAUS (Zech)
BONNIE BILLET
LORI BLAYDON
ASHLEY BRANDON
PATRICIA BRENNER
ZACHARY BRETZ
AMANDA BRICKUS
THOMAS BYERS
MARIA CABA
LUIS CAMACHO
SUSAN CATHCART
JOHN CATSAM
REBECCA COFFMAN
CHERYL COMBS
CARL COULSON
NATOSHIA ANN DAVENPORT
SARAH DAVIS
CRYSTAL DAVIS
CLAUDIA DEBENEDICTIS
BRENDA DENNIS
ARELIS DIAZ-GERALDINO
CYNTHIA DOWNEY
KELLY DUBBS
RICHARD DUNCAN
PATRICIA EATON
TERRY EDELBLUTE
JENETTE ESLINGER
ROY FERRY
JOHNNA FERRY
BONNIE FERRY
YAMEL FLORES-GONZALEZ
EMILY FREY

JESSIE GILLMAN
ROBERT GOTWALT
PHILLIP GRAYBILL
LORRIEANN GROSS
AMANDA GROVE
JACQUELINE HARLACHER
CHRISTY HARLACHER
HANNAH HARNER
KAREN HAYES
KAREN HECKERT
AMY HECKERT
JESSICA HEFFNER
MICHAEL HENNESSEY
HEATHER HENNEY
TAYSHA HERNANDEZ-MUNIZ
CONNIE HILBERT
TERRY HOLLINGER
FELICIA HOOVER
GARY HORICK
JAMES HUEY, JR
RIKKI JACKSON
TIFFANY JADRO
BARRY JEWITT
MELISSA JOHNSON
MAKAYLEN KIRKENDALL
BONNIE KITTLE
JOSIE KROFT
NACOLE LAIRD
DENISE LATCHAW
GLENDA LAUER
RICK LAUER
PAIGE LEADER
RENEE LEBRUN
THELMA LEHMAN
WANDA LENHART
JANE LEONARD
LISA ANN LIGHTCAP
MICHAEL LINK
JEFFERY MCBRIDE
SARAH MCCARTY
NANCY MCKINLEY
DAWN MCKINNEY
MIKE MEGONNELL
TERRIE MILLER
FRED MULBAH, SR.
MICHAEL MUMMERT
GIACOMA MUNISTERI

CONSTANCE MYERS
THERESA NIEVES
ANGELA OVERMILLER
KELLY PIERCE
Ana Placeres-Gonzalez
BARRY POET
SHAYNA PUSCHEL
JOHN QUINN
Scott REES
CASSANDRA REESE
KAREN REPP-ROBINSON
MANDY RICE
CHARLES RICHARDS
JOSE RODRIGUEZ-SANTOS
CAROL ROSE
APRIL ROSS
DAVID SANTIAGO
DEBORAH SAUERS
LIANNE SCHADE
ABU SESAY
LACY SHEETZ
JOANN SHIPLEY
MELISSA SHIPLEY
NADINE SIAR
JADE SMITH
TODD SMITH
JACQUELINE SMITH
LIN SNYDER
MELISSA SNYDER(Summers)
JUDITHE STEWART
CHRISTINA THOMPSON
JOSEPH THOMPSON
DIANE TRIPLETT
BONNIE VANBOURGONDIEN
CHRISTOPHER WEAKLAND
STEVEN WHITE
NICOLE WILEY
SHAWN WOLF
JANE YOST

DOVER AREA SCHOOL DISTRICT
DRAFT **BOARD MEETING MINUTES**
Tuesday, August 11, 2026 7:00 PM
Administration Complex, 101 Edgeway Road, Dover, PA 17315

President Conley called the meeting to order at 7:01 PM.

David Conley:	Present
Terry Emig:	Present
Allen Hogan:	Present
Craig Kindig:	Present
Miguel Lluberes:	Present
Rob McKinney:	Present
Karen Miller:	Present
Tyler Wagner:	Present
David Wolverton:	Present

Also in attendance: Dr. Timothy Mitzel, Interim Superintendent; Amy Aumen, Assistant Board Secretary

1. OPENING

1.A Pledge of Allegiance
1B. Roll Call

2. COMMUNICATIONS

3. PUBLIC COMMENT

- Susan Hamberger, Resident - asked the board for follow-up on an email she sent

4. BOARD PRESIDENT'S COMMUNICATION

4.A Announcement of Executive Session
- 07/21/2026 for Personnel
- 07/28/2026 for Personnel
- 08/11/2026 prior to board meeting for Personnel and another executive session was scheduled following the board meeting for Personnel.

5. BOARD COMMITTEE REPORTS

- Educational Excellence Committee Report - Director Miller
- Facilities/Safety Committee Report - Director Emig
- Resource Oversight Committee Report - Director McKinney
- Policy Committee Report - Director Kindig

6. ACTION/CONSENT: HUMAN RESOURCES

Motion to approve all items listed under Consent/Human Resources.
This motion, made by Terry Emig and seconded by Allen Hogan, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

- 6.A Appointments

Administration- pending receipt of all required paperwork				
Name	Building	Position	Effective Date	Salary
Kessler, Julee	DW	Assistant Director of Ex Child	10/11/2026	$97,000.00

Professional-pending receipt of all required paperwork				
Name	Building	Position	Effective Date	Salary
Pfeffer, Elizabeth	NSE	Teacher, Learning Support	8/11/2026	$99,432 M +60, step 15
Allen, Noah	HS	Teacher, Math	8/11/2026	$63,120 Bachelors step 3
Stambaugh, Kayli	NSE	Teacher, 2nd grade	8/11/2026	$62,162 Bachelors step 2

Support-pending receipt of all required paperwork				
Name	Building	Position	Effective Date	Pay Rate
Kunkel, Jena	WE	Food Service Worker, 5 hours	8/11/2026	$15.18 level 1 step 2
Rogers, Deanna	MS	Food Service Worker, 5 hours	8/11/2026	$15.18 level 1 step 2
Groendyk, Lexus	NSE	Head Cook	8/11/2026	$18.13 level 4 step 5
May, Brittany	HS	Food Service Cook, 5.5 hours	8/11/2026	$15.48 level 1 step 3
Coyle, Tracy	NSE	PCA, AS	8/11/2026	$17.23 level 3 step 4
Kauffman, Deanna	MS	Food Service Worker, 4 hours	8/11/2026	$15.18 level 1 step 2
Holder, Rhys	DE	Custodian, Full-Time Evening	8/11/2026	$14.88 level 1 step 1
Heckert, Amy	MS	Food Service, 4 hours	8/11/2026	$15.48 level 1 step 3
Holder, Rhys	DE	Custodian, Evening FT	8/11/2026	$14.88 level 1 step 1

Coaches/Advisors-pending receipt of all required paperwork				
NAME	Year/Level	Position	Effective Date	Pay Rate
Keane, Lauren	Year 1 level 1	Advisor, Musical Assistant Director	8/11/2026	$1860/year
Eby, Rebecca	Year 1 level 1	Advisor, Memory Book	8/11/2026	$1,122/year (correction)
Metz, Tennison	Year 1 level 1	Coach, Tennis Girls	8/11/2026	$2,285/season

- 6.B Transfers

Name	Position Type	Prev Position	Effective Date	New Position	New Salary	For
Neal, Mark	Coach	Coach, JH Volleyball Head	8/11/2026	Coach, Varsity Volleyball Head	$4529/season	Vacancy
Berkheimer, Heath	Support	Food Service	8/11/2026	PCA, AS	$16.20 level 3 step 1	Vacancy
Ale-bhujel, Geeta	Support	Custodian, evening	8/11/2026	PCA, AS	$17.23 level 3 step 4	Vacancy

- 6.C Resignations and Terminations

Name	Position	Emp Type	Building	Effective Date	Reason
Oswalt, Justin	Teacher, Learning Support	Professional	HS	9/21/2026	Voluntary
Weakland, Christopher	Head Cook	Support	NSE	7/27/2026	Voluntary
Meeder, Terasa	PCA, AS	Support	DE	8/3/2026	Voluntary

6.D Leaves

Not FMLA Eligible- Medical					
#	Building	Position	Effective Date	Est Return Date	Reason
1	HS	Food Service	9/1/2026	9/30/2026	Medical Condition

- 6.Retirements

Name	Position	Building	Emp Type	Effective Date	DASD Years of Service
Dellinger, Tracie	Teacher, 2nd grade	NSE	Professional	7/27/2026	10

7. ACTION

7.A 2026-2027 High School ATSI non-Title I School Plan

Motion to approve 2026-2027 High School ATSI non-Title I School Plan.
This motion, made by Rob McKinney and seconded by Karen Miller, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

7.B Minutes: July 21, 2026 Board Meeting

Motion to approve Minutes of the July 21, 2026 Board Meeting.
This motion, made by Terry Emig and seconded by Tyler Wagner, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

8. ACTION - CONTRACTS/AGREEMENTS

8.A Affiliation Agreement with Robert Morris University

Motion to approve Affiliation Agreement with Robert Morris University.
This motion, made by Karen Miller and seconded by Miguel Lluberes, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

8.B TechLink Consortium Memorandum of Understanding between HACC and Dover Area High School CTE

Motion to approve TechLink Consortium Memorandum of Understanding between HACC and Dover Area High School CTE.
This motion, made by Terry Emig and seconded by Karen Miller, Carried.

David Conley:	Yes
Terry Emig:	Yes

Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

8.C 2026-2027 Letter of Agreement with TrueNorth Wellness Services for Student Assistance Program Drug and Alcohol Liaison Services

Motion to approve 2026-2027 Letter of Agreement with TrueNorth Wellness Services for Student Assistance Program Drug and Alcohol Liaison Services.
This motion, made by Terry Emig and seconded by Tyler Wagner, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

8.D Automated Logic Contracting Services Plan for 2026-2027

Motion to approve Automated Logic Contracting Services Plan for 2026-2027.
This motion, made by Terry Emig and seconded by Allen Hogan, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

8.E 11400 LLC Quote for North Salem Elementary Combi Oven

Motion to approve 11400 LLC Quote for North Salem Elementary Combi Oven.
This motion, made by Rob McKinney and seconded by Terry Emig, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

9. ACTION: FINANCE

9.A Bills Paid

Motion to approve Bills Paid.
This motion, made by Rob McKinney and seconded by Terry Emig, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

9.B Treasurers Report

Motion to approve Treasurer's Report.
This motion, made by Rob McKinney and seconded by Terry Emig, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

9.C YTD Budget to Actual Report

Motion to approve YTD Budget to Actual Report.
This motion, made by Rob McKinney and seconded by Terry Emig, Carried.

David Conley:	No
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 8, No: 1

10 POLICIES (2nd Reading)

Motion to approve Policies listed under 2nd Reading:

123 - Interscholastic Athletics
236.1- Threat Assessment
317 - Conduct/Disciplinary Procedures
317.1 - Educator Misconduct.

This motion, made by Craig Kindig and seconded by Miguel Lluberes, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

11. POLICIES (1st Reading)

- 815.1 – Use of Generative Artificial Intelligence in Education
- AI Handbooks

12. PUBLIC COMMENT

13. MISCELLANEOUS

Comments/Observations from Board Members

14. ADJOURNMENT

- Future Meeting Announcements
- Adjourn Meeting

Motion to adjourn meeting at 7:55 PM.
This motion, made by Terry Emig and seconded by Allen Hogan, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

Miranda Weaver, Board Secretary

DOVER AREA SCHOOL DISTRICT
***DRAFT* BOARD MEETING MINUTES**
Tuesday, August 18, 2026 7:00 PM
Administration Complex, 101 Edgeway Road, Dover, PA 17315

President Conley called the meeting to order at 7:00 PM

David Conley:	Present
Terry Emig:	Present
Allen Hogan:	Present
Craig Kindig:	Present
Miguel Lluberes:	Present
Rob McKinney:	Present
Karen Miller:	Present
Tyler Wagner:	Present
David Wolverton:	Present

Also present: Dr. Timothy Mitzel, Interim Superintendent; Amy Aumen, Assistant Board Secretary

1. OPENING

1.A Pledge of Allegiance
1.B. Roll Call

2. PRESENTATIONS

2.A Generative Artificial Intelligence - Samantha Helwig

3. PUBLIC COMMENT

4. Policy #815.1 - Use of Generative Artificial Intelligence

- Motion to amend main motion to transpose Policy 815.1 definitions Level 2 and Level 3.
  This motion, made by Rob McKinney and seconded by Craig Kindig, Carried.

David Conley:	Yes
Terry Emig:	No
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 8, No: 1

- Motion to approve Policy #815.1 - Use of Generative Artificial Intelligence with revision to transpose Level 2 and Level 3.
  This motion, made by Rob McKinney and seconded by Craig Kindig, Carried.

David Conley:	Yes
Terry Emig:	No
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 8, No: 1

- Motion to approve AI Handbooks.
  This motion, made by Tyler Wagner and seconded by Miguel Lluberes, Carried.

  David Conley: Yes
  Terry Emig: No
  Allen Hogan: Yes
  Craig Kindig: Yes
  Miguel Lluberes: Yes
  Rob McKinney: Yes
  Karen Miller: Yes
  Tyler Wagner: Yes
  David Wolverton: Yes
  Yes: 8, No: 1

5. STAFF RECOGNITION

Nina Rogers, Paraprofessional - 1 year
Karen Stambaugh, Paraprofessional - 1 year
Jessica Dolloff, PCA - 1 year
Chelsea Cabrera, Paraprofessional – 4 years
Aaron Tolbert, Custodial - 19 years
Emily Miller, Director of CTE - 13 years
Phillip Stein, Maintenance - 12 years

6. BOARD PRESIDENT'S COMMUNICATION

Announcement of Executive Sessions

- 08/18/2026 prior to the board meeting for Personnel and another executive session was scheduled following the board meeting for Personnel

7. ACTION/CONSENT: HUMAN RESOURCES

Motion to approve all items listed under Action/Consent: Human Resources.
This motion, made by Terry Emig and seconded by Allen Hogan, Carried.

David Conley: Yes
Terry Emig: Yes
Allen Hogan: Yes
Craig Kindig: Yes
Miguel Lluberes: Yes
Rob McKinney: Yes
Karen Miller: Yes
Tyler Wagner: Yes
David Wolverton: Yes
Yes: 9, No: 0

- 7.A Appointments

Coaches/Advisors-pending receipt of all required paperwork				
NAME	Year/Level	Position	Effective Date	Pay Rate
Schmidt, Autumn	Year 2 level 1	Coach, Varsity Assistant Girls Volleyball	8/18/2026	$2,113.00

- 7.B Transfers

Name	Position Type	Prev Position	Effective Date	New Position	New Salary	For
Zeigler, Kristen	Coach	Coach, JH Assistant Volleyball Girls	8/4/2026	Volunteer Coach	$0.00	Vacancy
Pittman, Roger	Coach	Coach, JH Assistant Wrestling	8/18/2026	Coach, Head Girls Wrestling	$3,672 level 1 year 2	Vacancy

- 7.C Resignations & Terminations

Name	Position	Emp Type	Building	Effective Date	Reason
Simpson, Timothy	Department Chair, Ex Child	Advisor	MS	8/5/2026	Voluntary
Becker, Anna	Coach, Girls Tennis 50%	Coach	Ath	8/11/2026	Voluntary
Becker, Andrew	Coach, Girls Tennis 50%	Coach	Ath	8/11/2026	Voluntary

- 7.D Retirements

Name	Position	Building	Emp Type	Effective Date	DASD Years of Service
Baldwin, Maria	Paraprofessional, Learning Support	HS	Support	8/6/2026	1 year

- 7.E Extra Curricular and Coaching 26-27 School Year

Activity	Season	Position	First Name	Last Name	26/27 YEAR	Level
Band	FALL	Colorguard Instr II (35%)	ERIC	RUPP	2	1
Band	FALL	Percussion Instr (40%)	GRANT	BROWN	9	4
Band	FALL	Colorguard Instr I (40%)	GWEN	SHAFFER	1	1
Band	FALL	Colorguard Instr III (30%)	KATIE	NAGEL	1	1
Band	FALL	Assistant Director (60%)	LAURA	BAXTER	1	1
Band	FALL	Director	MATTHEW	GUADAGNINO	3	2
Band	FALL	Assistant Percussion Instr (35%)	TYLER	STARRY-HESS	4	2
Baseball 12 WKS	Spring	Varsity Assistant (70%)	CRAIG	HARE	2	1
Baseball 12 WKS	Spring	JV Head (70%)	DREW	HUFNAGLE	4	2
Baseball 12 WKS	Spring	Head Coach	JOHN	MCDONALD	8	4
Baseball 12 WKS	Spring	JV Assistant (60%)	TODD	RACEY	2	1
Basketball - BOYS 15 WKS	Winter	Varsity Assistant (70%)	BRADY	BOWMAN	3	2
Basketball - BOYS 15 WKS	Winter	Head Coach	DANIEL	OVERMILLER	6	3
Basketball - BOYS 15 WKS	Spring	Intramurals (35%)	DANIEL	OVERMILLER	6	3
Basketball - BOYS 15 WKS	Winter	JH Assistant (50%)	GLENN	GALLAGHER	1	1
Basketball - BOYS 15 WKS	Winter	JH Head (55%)	WILLIAM	NOVAK	2	1
Basketball - GIRLS 15 WKS	Winter	Varsity Assistant (70%)	CHRISTOPHER	DAY	12	5
Basketball - GIRLS 15 WKS	Winter	Head Coach	CORY	MATTHEWS	8	4
Basketball - GIRLS 15 WKS	Winter	JH Head (55%)	JASON	BROWN	2	1
Basketball - GIRLS 15 WKS	Winter	JH Assistant (50%)	JASON	STREET	3	2
Cheerleading	Fall	JH Assistant (50%)	ADRIENE	SAXON	1	1
Cheerleading	Winter	JH Assistant (50%)	ADRIENE	SAXON	1	1
Cheerleading	Fall	Varsity Assistant (70%)	HANNAH	DORR	1	1

Cheerleading	Winter	Varsity Assistant (70%)	HANNAH	DORR	1	1
Cheerleading	Fall	Head Coach	MADALYN	SMYSER	1	1
Cheerleading	Winter	Head Coach	MADALYN	SMYSER	1	1
Cheerleading	Fall	JH Head (55%)	RANDI	REICHERT	1	1
Cheerleading	Winter	JH Head (55%)	RANDI	REICHERT	1	1
Chorus		Director	SAMANTHA	ROBERTS	14	5
Class Advisors		Senior	ANGELA	BLEVINS	8	4
Class Advisors		Senior	BRITNEY	MARSH	4	2
Class Advisors		Sophomore	CURTIS	POORMAN	6	3
Class Advisors		Sophomore	MATTHEW	SPAHR	6	3
Class Advisors		Junior	NICK	RUGGERIE	3	2
Class Advisors		Junior	TERI	MARLOWE	10	4
Cross Country (Co-ed) 10 WKS	FALL	Varsity Assistant (70%)	JAMIE	BRANDSTADTER	12	5
Cross Country (Co-ed) 10 WKS	FALL	JH Head (55%)	KELLI	LINKER	6	3
Cross Country (Co-ed) 10 WKS	FALL	JH Assistant (50%)	KELLY	FENN	4	2
Cross Country (Co-ed) 10 WKS	FALL	Head Coach	KELLY	REIDER	1	1
DECA/Red Zone		Advisor	MELISSA	URAL	3	2
Elementary Band		Elementary Band Advisors - NS/WE/DE/LE	ALEXIS	FAHS	5	3
Elementary Band		Elementary Band Advisors - WE/LE	MICHAEL	DRUCK	4	2
Elementary Band		Elementary Band Advisors - DE/NS	STEPHANIE	HAIFLEY	27	5
Envirothon		Advisor DE	BRIDGET	SMITH	4	2
Envirothon		Advisor NS	HALEY	JESZENKA	3	2
Envirothon		Advisor NS	HALEY	JESZENKA	3	2
Envirothon		Advisor LE	JEFF	JUDY	4	2
Envirothon		Advisor WE	JENNIFER	KESSLER	5	3
Envirothon		Advisor LE	JOHN	MURPHY	21	5
Envirothon		Advisor HS	LESLIE	FORBES	13	5
Envirothon		Advisor DE	LISA	ERNEY	6	3
Envirothon		Advisor MS	RENEE	SPAHR	6	3
Envirothon		Advisor WE	WENDY	BEHR	6	3
Fall Play		Director	JAMIE	BRANDSTADTER	11	5
Fall Play		Assistant Director (60%)	SARA	BLECHER	10	4
Fall Play		Set Designer (40%)	WIM	NEY	11	5
Field Hockey 11 WKS	FALL	Head Coach	TARISHA	BRADFORD	2	1
Football 13 WKS	FALL	Varsity Assistant (70%)	ANDREW	SNELBAKER	4	2
Football 13 WKS	FALL	8th Grade Assistant (45%)	BRANDON	CESKY	2	1
Football 13 WKS	FALL	8th Grade Assistant (45%)	CHAD	GOTWALT	5	3
Football 13 WKS	FALL	9th Grade Head (55%)	COLE	JESMER	3	2
Football 13 WKS	FALL	8th Grade Head (50%)	JUSTIN	ROWAND	7	3
Football 13 WKS	FALL	Varsity Assistant (70%)	MARC	DELLINGER	18	5

Football 13 WKS	FALL	Varsity Assistant (70%)	MATHEW	KEESLER	1	1
Football 13 WKS	FALL	Varsity Assistant (70%)	PETER	BOWEN	18	5
Football 13 WKS	FALL	Head Coach	WAYNE	SNELBAKER, Jr	20	5
Game Manager	Spring	Spring Game Manager HS	JOHN	SPORER	12	5
Game Manager	Fall	Fall Game Manager HS	LAUREN	CRAIG	2	1
Golf 10 WKS	FALL	Head Coach	CHARLES	JORDAN	14	5
Lacrosse 12 WKS Boys	SPRING	Varsity Assistant (70%) - BOYS	GRIFFIN	BRUMBAUGH	2	1
Lacrosse 12 WKS Boys	SPRING	Head Coach - BOYS	JUD	PEQUIGNOT	2	1
Lacrosse 12 WKS Girls	SPRING	Varsity Assistant (70%) - GIRLS	DONALD	NEFF	9	4
Math Counts		Math Counts Advisor	REBECCA	EBY	4	2
Memory Book (Int. School)		Advisor	REBECCA	EBY	1	1
Musical		Choreographer (40%)	EMMA	GAETJEN	1	1
Musical		Music Director (60%)	GEORGE	BRADSHAW	36	5
Musical		Director	JAMIE	BRANDSTADTER	12	5
Musical		Assistant Director (60%)	LAUREN	KEANE	1	1
Musical		Vocal Coach (50%)	SAMANTHA	ROBERTS	11	5
Musical		Set Designer (40%)	WIM	NEY	11	5
Musical		Set Designer (40%)	WIM	NEY	11	5
Newsletter (Eagle's Eye)		Advisor (1)	ANGELA	BLEVINS	9	4
NHS		Advisor - HS	CURTIS	POORMAN	6	3
NHS		Advisor - HS	MATTHEW	SPAHR	9	4
NHS		Advisor - MS	RENEE	SPAHR	3	2
NHS		Advisor - MS	RYAN	DONNELLY	2	1
Power Lifting		Head Coach	CHRISTOPHER	ORT	3	2
Power Lifting		Assistant Coach (70%)	JOHN	HIDEN	2	1
Project Harmony		Advisor	LESLIE	FORBES	3	2
Quiz Bowl		Coach	ANDY	KARRAS	35	5
Quiz Bowl		Coach	LISA	KARRAS	3	2
Robotics		Advisor (1)	ANDY	KARRAS	3	2
S.A.D.D.		Advisor	SHANNON	MORT	19	5
S.A.D.D.		Advisor	TERI	MARLOWE	22	5
Skills USA		Advisor, Skills USA - Graphic	ASHLEY	LUCABAUGH	3	2
Skills USA		Advisor, Skills USA - Computer	NICHOLAS	LAMB	2	1
Skills USA		Advisor, Skills USA - Engineering	NOLAN	SMITH	14	5
Skills USA - Advisor State Officer Ext		Skills USA - Advisor State Officer Ext	NOLAN	SMITH	14	5
Skills USA - Advisor State Officer Ext		Skills USA - Advisor State Officer Ext	vacant			1
Soccer Boys	FALL	Head Coach BOYS	DEREK	KLINE	9	4

Soccer Boys	SPRING	JH Head Coach (55%) BOYS	DEREK	KLINE	9	4
Soccer Boys	FALL	Varsity Assistant (70%) BOYS	JUSTIN C.	HOFFMAN	3	2
Soccer Boys	SPRING	JH Assistant (50%)	MEL	JAMES	3	2
Soccer Girls	SPRING	JH Head Coach (55%) GIRLS	ALAN	BRAUER	9	4
Soccer Girls	FALL	Varsity Assistant (70%) GIRLS	ELLIE	HALL	2	1
Soccer Girls	FALL	Varsity Assistant (70%) GIRLS	JAKE	ALTIMORE	2	1
Soccer Girls	FALL	Head Coach GIRLS	MATTHEW	SPAHR	16	5
Soccer Girls	SPRING	JH Assistant (50%)	MATTHEW	SPAHR	16	5
Softball 12 WKS	Spring	JV Head (70%)	EMILY	GRAHAM	2	1
Softball 12 WKS	Spring	JV Assistant (65%)	PATRICK	THOMAS	5	3
Softball 12 WKS	Spring	Head Coach	TERRY	CHOATE	16	5
Student Council (High School)		Advisor	ROBERT	ESHBACH	24	5
Student Council (High School)		Advisor	TARA	FOCHT	24	5
Student Council (Middle School)		Advisor	RYAN	DONNELLY	7	3
Student Council (Middle School)		Advisor	SHAWNA	BLASS	6	3
Swimming 14 WKS	Winter	Varsity Assistant (70%)	ALEXANDRA	SWAN	2	1
Swimming 14 WKS	Winter	Varsity Assistant (70%)	JENNIFER	RAUHAUSER	18	5
Swimming 14 WKS	Winter	Varsity Assistant (70%)	LAUREN	CRAIG	9	4
Swimming 14 WKS	Winter	Head Coach	ROSS	SPANGLER	9	4
Tennis Girls	Fall	Head Coach (Girls)	TENNISON	METZ	1	1
Track and Field	SPRING	Varsity Assistant (70% of separate rate)	ANDREW	GREEN	12	5
Track and Field	SPRING	Varsity Assistant (70% of separate rate)	BRIAN	COMEGNA	2	1
Track and Field	SPRING	Head Coach if separate Girls	CHRISTOPHER	DAY	11	5
Track and Field	SPRING	Head Coach if separate Boys	JOSHUA	BRANDSTADTER	12	5
Track and Field	SPRING	Varsity Assistant (70% of separate rate)	MARTIN	GREEN	34	5
Varsity Club		Advisor	LAUREN	CRAIG	3	2
Volleyball Boys	SPRING	Head Coach (Boys)	CHRISTOPHER	DAVIS	8	4
Volleyball Boys	SPRING	Varsity Assistant (70%) (Boys)	SASA	JOVICEVIC	7	3
Volleyball Girls	SPRING	7th/8th Grade Head (Girls) (50%)	MARK	NEAL	10	4
Volleyball Girls	FALL	Head Coach GIRLS	MARK	NEAL	10	4
Wrestling Girls	WINTER	Varsity Head	ROGER	PITTMAN	2	1
Yearbook (High School)		Advisor (1)	ANGELA	BLEVINS	2	1
Yearbook (High		Advisor (1)	SAM	HELWIG	5	3

School)						

8. ACTION/CONSENT: CTE CURRICULUM

Motion to table section 8 - CTE Curriculum.

- CTE Curriculum: Accounting Technology
- CTE Curriculum: Agriculture, General
- CTE Curriculum: Agricultural Mechanization
- CTE Curriculum: Business Administration
- CTE Curriculum: AP Business with Personal Finance
- CTE Curriculum: Commercial and Advertising Art
- CTE Curriculum: Computer Technology
- CTE Curriculum: Financial and Career Exploration
- CTE Curriculum: Horticulture and Landscaping
- CTE Curriculum: Marketing

This motion, made by Craig Kindig and seconded by Miguel Lluberes, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

9. ACTION

9.A DAESPA Grievance

Motion to deny DAESPA Grievance.

This motion, made by Craig Kindig and seconded by Tyler Wagner, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

9.B VLN Partners Blended Learning Service Agreement for Dover Cyber Academy

Motion to approve VLN Partners Blended Learning Service Agreement for Dover Cyber Academy.

This motion, made by Rob McKinney and seconded by Miguel Lluberes, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

10. REPORTS

10.A Dover Eagle Foundation Report - Director Hogan
10.B. York Adams Academy (YAA) Report - Director Emig
10.C York County School of Technology (YCST) Report - Director Conley
10.D LIU #12/YORK LEARNING CENTER – Director Miller
10.E Legislative Liaison - Director McKinney
10.F Dover Industrial & Commercial Development Committee (ICDC) Report - Director Wolverton
10.G Pennsylvania School Boards Association (PSBA) Report - Director Lluberes
10.H Superintendent's Report

11. PUBLIC COMMENT

- Shila Kramer, Resident – stated that it has been a good start of the school year for her children

12. MISCELLANEOUS

Comments/Observations from Board Members

13 ADJOURNMENT

- Future Meeting Announcements

- Adjourn Meeting

Motion to adjourn meeting at 8:17 PM.
This motion, made by Terry Emig and seconded by Tyler Wagner, Carried.

David Conley:	Yes
Terry Emig:	Yes
Allen Hogan:	Yes
Craig Kindig:	Yes
Miguel Lluberes:	Yes
Rob McKinney:	Yes
Karen Miller:	Yes
Tyler Wagner:	Yes
David Wolverton:	Yes

Yes: 9, No: 0

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Board Secretary

Check	Full Name (FL)	Description	Amount
506566	Dover Area School District	Invoice 2512600067 - 05.01.26 CC	$1,394.36
506566	Dover Area School District	June Payroll - Invoice #2512600068	$36,154.72
506567	Hobart Service	HS - Warewasher Service/Repair	$1,907.49
506568	United Refrigeration Inc	Supplies-District Cafe	$1,922.06
506568	United Refrigeration Inc	Supplies-District Cafe	$32.74
506569	Gold Star Foods Inc	MS - Program Food	$280.80
506570	United Refrigeration Inc	Supplies-MS	$521.04
506571	Dover Area School District	Invoice 2512700002	$1,394.51
506572	Food Service Connections, LLC	Food Service Training	$413.20
506573	Giant Food Stores Inc	Back to School Training Food	$165.12
506574	Dover Area School District	July Payroll - Invoice #2512700001	$18,669.30
506575	Giant Food Stores Inc	Program Food - Misc. Items	$23.68
9000000009	Food Safety Solutions Inc	Food Service Maintenance	$18,237.39
9000000010	Nicole Walter	Mileage Reimbursement	$7.83
		Total	**$81,124.24**

Check	Full Name (FL)	Description	Amount
3693	Sip Us Llc	Phone Service	$493.05
3694	A T & T Mobility	District Mobility	$2,512.56
3695	Lincoln Benefit Trust	AUGUST 2026	$736,642.
3696	Rutter's Farm Stores - Fm Net	2026-2027 Blanket PO for Rutter's Farm Stores - FM Net - E&B	$932.11
3697	Rutter's Farm Stores - Fm Net	2026-2027 Blanket PO for Rutter's Farm Stores - FM Net - F&S	$310.05
3698	Rutter's Farm Stores - Fm Net	2026/27 Blanket PO for Rutter's Farm Stores - FM Net - District	$1,511.54
3699	United Parcel Service	District Shipments	$23.17
3700	United Parcel Service	District Shipments	$49.54
3701	United Parcel Service	District Shipments	$23.45
3702	United Parcel Service	District Shipments	$23.50
3703	United Parcel Service	District Shipments	$23.45
1044110	Ei Associates	Professional Services	($2,500.00)
1044271	Pa Assoc Of Career &	Symposium Registration - E. Miller	($280.00)
1044331	Specialized Education Of Pennsylvania Inc.	2025-26 SY Invoice #INV248800 Secondary Special Ed Students placed at Alt Ed program	($6,462.00)
1044331	Specialized Education Of Pennsylvania Inc.	2025-26 SY Invoice #INV248341 Elem & Secondary Special Ed Students placed at Alt Ed program	($15,449.
1044432	3d Universe, Llc	Replacement 3D Printers - Mastrilli & Jones	$2,174.04
1044433	Acia Ltd	General Air Test	$7,305.00
1044434	Batteries Plus	Batteries	$495.10
1044435	Biomedical Services Inc	26-27 SY Inspections of AEDs in each building	$1,758.68
1044436	Brown's Glass	Clear Lexan	$39.78
1044437	Center For Collaborative Classroom	26/27 SY Consumables for Collaborative Classroom	$25,485.20
1044438	City Floors Of York Inc	Carpet	$1,115.00
1044439	Coach Emma B LLC	Cheerleading - Choreography	$2,125.00
1044440	D.C. Humphrys Co.	Equipment - Track and Field	$927.00
1044441	Delta-T Group	Paraprofessional Coverage	$705.39
1044442	Doceo Office Solutions Llc	Remaining Postage for 26-27 Real Estate Tax Bills	$1,000.42
1044443	Educere Llc	Summer 2026 Credit Recovery and Enrichment Courses	$9,324.00
1044443	Educere Llc	Summer 2026 Credit Recovery and Enrichment Courses	$5,390.00
1044444	Flinn Scientific Inc	Reg Instructional Supplies - Science (7th grade)	$1,339.29
1044444	Flinn Scientific Inc	Reg Instructional Supplies - Science (7th grade)	$62.32
1044445	Globe Ticket	Athletic Office - Admission Tickets	$1,126.00
1044446	Hmh Education Company	Read 180 Flex & Dedicated One Year Digital Subscription (Proposal #009681787)	$2,972.00
1044447	Lacrosse Unlimited Inc.	Equipment - Boys' Lacrosse	$2,173.24
1044448	Meghan Latshaw	Sports Physical Night Worker	$50.00
1044449	Beth Laughman	Sports Physical Night Worker	$50.00
1044450	Lazel Inc., Explorelearning	ExploreLearning Reflex Math / Frax Math - 3 Yr contract Quote # Q-395629	$54,383.00
1044451	Leaf Capital Funding Llc	Copier Lease	$5,514.00
1044452	Macmillan Holdings Llc	Business w/ Personal Finance for the AP Course Materials	$3,783.71
1044452	Macmillan Holdings Llc	Business w/ Personal Finance for the AP Course Materials	$1,200.00
1044453	Mcgraw-hill School Education Holdings, Llc	Aleks 26/27	$9,687.50
1044454	Medco Supply Co	Equipment and Supplies - Athletic Trainers	$22.56
1044455	Messick'S	Grounds Supplies	$443.53
1044456	Pa Assoc Of Career &	Symposium Registration - E. Miller	$280.00
1044457	Pa FFA Association	26-27 Affiliation Membership Fee	$3,744.00
1044458	Print-o-stat	All Season and Family Passes	$473.01

Check	Full Name (FL)	Description	Amount
1044459	Ram Industrial Services, LLC	Pool	$1,527.44
1044460	Riddell / All American Sports	Equipment - Football	$4,443.95
1044460	Riddell / All American Sports	Equipment - Football	$1,692.85
1044460	Riddell / All American Sports	Equipment - Football	$1,573.95
1044460	Riddell / All American Sports	Uniforms - Football	$17,579.00
1044460	Riddell / All American Sports	Uniforms - Football	$5,880.00
1044461	Thomas Ryan	Sports Physical Night Worker	$50.00
1044462	Scott Electric	Laminate	$235.60
1044463	Spiraledge Inc Dba Swimoutlet. Com	Swimming - Equipment	$1,620.00
1044464	Veritiv Operating Company	custodial supplies	$6,964.27
1044465	Verizon Wireless	2026/27 Communication	$197.40
1044465	Verizon Wireless	2026/27 Communication	$109.82
1044466	Vpw Enterprises, Llc	Supplies	$268.55
1044467	York County Chief Sch Admin	2026-2027 Chief School Administrator Dues	$75.00
1044468	Zaner-bloser	3rd-6th grade Handwriting Curriculum	$1,200.00
1044469	2 The Tee Outfitters, The Rojel Company	Equipment - Football	$5,850.00
1044469	2 The Tee Outfitters, The Rojel Company	Equipment - Football	$2,880.00
1044469	2 The Tee Outfitters, The Rojel Company	Equipment - Football	$630.00
1044469	2 The Tee Outfitters, The Rojel Company	Equipment - Football	$1,770.00
1044469	2 The Tee Outfitters, The Rojel Company	Equipment - Football	$900.00
1044469	2 The Tee Outfitters, The Rojel Company	Equipment - Football	$900.00
1044469	2 The Tee Outfitters, The Rojel Company	Equipment - Football	$720.00
1044470	A T & T Mobility	District Mobility	$52.06
1044471	Acia Ltd	Fogging	$1,010.00
1044472	Ainsworth Inc.	Repair	$10,107.29
1044473	Stella Amponsah	Reimbursement Laptop	$1,376.94
1044474	Bfpe International	2026/27 Extinguisher Services	$2,137.75
1044474	Bfpe International	2026/27 Extinguisher Services	$550.00
1044474	Bfpe International	2026/27 Extinguisher Services	$123.50
1044474	Bfpe International	2026/27 Extinguisher Services	$600.00
1044474	Bfpe International	2026/27 Extinguisher Services	$100.00
1044474	Bfpe International	Monitoring	$390.00
1044474	Bfpe International	Monitoring	$390.00
1044474	Bfpe International	Annual Fire Test & System Inspection	$600.00
1044474	Bfpe International	Annual Fire Test & System Inspection	$7,600.00
1044475	Blick Art Materials	Beginning of the year art supplies	$26.12
1044476	Bob's Outdoor & Power Equip	Supplies	$55.99
1044476	Bob's Outdoor & Power Equip	Supplies	$87.98
1044477	Boyer & Ritter	Audit	$5,500.00
1044478	Rachelle Davis	Reimbursement	$149.43
1044479	Dover Township	2025/26 Water & Sewer Blanket	$1,931.55
1044480	Ei Associates	Professional Services	$2,500.00
1044481	Giant Food Stores Inc	Custodial Lunch	$39.93

Check	Full Name (FL)	Description	Amount
1044481	Giant Food Stores Inc	Custodial Lunch	($0.71)
1044482	Jerry Holcomb	2026/27 Blanket Pest Maintenance Service	$85.00
1044482	Jerry Holcomb	2026/27 Blanket Pest Maintenance Service	$95.00
1044482	Jerry Holcomb	2026/27 Blanket Pest Maintenance Service	$95.00
1044482	Jerry Holcomb	2026/27 Blanket Pest Maintenance Service	$95.00
1044482	Jerry Holcomb	2026/27 Blanket Pest Maintenance Service	$105.00
1044482	Jerry Holcomb	2026/27 Blanket Pest Maintenance Service	$110.00
1044483	Lincoln Intermediate Unit # 12	Job Coaching	$310.00
1044484	Linde Gas & Equipment Inc.	Cylinder Rental Return- Ag Ed	$92.29
1044484	Linde Gas & Equipment Inc.	Cylinder Rental Fee - Ag Ed	$187.24
1044484	Linde Gas & Equipment Inc.	Cylinder Rental	$50.95
1044485	Pennsylvania Principals Association	Membership Renewal - Antonio Riggins (07/01/2026-06/30/2027)	$605.00
1044486	R E Michel Co Inc	Parts	$31.24
1044487	Robert'S Oxygen Company Inc	CO2	$286.94
1044488	Schaedler Yesco Distrib Inc	Supplies	$1,303.00
1044488	Schaedler Yesco Distrib Inc	Supplies	$1,230.00
1044489	Schoolmate	Student Act - Student Planners (to be reimbursed by Barksdale)	$2,465.00
1044490	Spangler'S Ace Hardware	Supplies	$2.15
1044490	Spangler'S Ace Hardware	Supplies	$16.19
1044490	Spangler'S Ace Hardware	Supplies	$15.29
1044490	Spangler'S Ace Hardware	Supplies	$25.97
1044490	Spangler'S Ace Hardware	Supplies	$1.12
1044490	Spangler'S Ace Hardware	Supplies	$22.62
1044490	Spangler'S Ace Hardware	Supplies	$10.78
1044490	Spangler'S Ace Hardware	Supplies	$20.69
1044490	Spangler'S Ace Hardware	Supplies	$45.56
1044490	Spangler'S Ace Hardware	Supplies	$17.98
1044490	Spangler'S Ace Hardware	Supplies	$4.99
1044490	Spangler'S Ace Hardware	Supplies	$11.32
1044490	Spangler'S Ace Hardware	Supplies	$17.60
1044490	Spangler'S Ace Hardware	Supplies	$15.34
1044490	Spangler'S Ace Hardware	Supplies	$22.43
1044490	Spangler'S Ace Hardware	Supplies	$12.12
1044490	Spangler'S Ace Hardware	Supplies	$32.28
1044490	Spangler'S Ace Hardware	Supplies	$10.77
1044490	Spangler'S Ace Hardware	Supplies	$14.88
1044490	Spangler'S Ace Hardware	Supplies	$8.61
1044490	Spangler'S Ace Hardware	Supplies	$5.93
1044490	Spangler'S Ace Hardware	Supplies	$2.30
1044490	Spangler'S Ace Hardware	Supplies	$7.67
1044490	Spangler'S Ace Hardware	Supplies	$6.46
1044490	Spangler'S Ace Hardware	Supplies	$6.29
1044490	Spangler'S Ace Hardware	Supplies	$92.76
1044490	Spangler'S Ace Hardware	Supplies	$2.80
1044490	Spangler'S Ace Hardware	Supplies	$2.87
1044490	Spangler'S Ace Hardware	Supplies	$5.37
1044490	Spangler'S Ace Hardware	Supplies	$5.14
1044490	Spangler'S Ace Hardware	Supplies	$9.59

Check	Full Name (FL)	Description	Amount
1044490	Spangler'S Ace Hardware	Supplies	$8.99
1044490	Spangler'S Ace Hardware	Supplies	$1.29
1044490	Spangler'S Ace Hardware	Supplies	$2.39
1044490	Spangler'S Ace Hardware	Supplies	$32.07
1044490	Spangler'S Ace Hardware	Supplies	$9.34
1044490	Spangler'S Ace Hardware	Supplies	$36.15
1044490	Spangler'S Ace Hardware	Supplies	$3.67
1044490	Spangler'S Ace Hardware	Supplies	$16.66
1044490	Spangler'S Ace Hardware	Supplies	$8.33
1044490	Spangler'S Ace Hardware	Supplies	$8.99
1044490	Spangler'S Ace Hardware	Supplies	$6.09
1044490	Spangler'S Ace Hardware	Supplies	$3.34
1044490	Spangler'S Ace Hardware	Supplies	$16.05
1044490	Spangler'S Ace Hardware	Supplies	$6.39
1044490	Spangler'S Ace Hardware	Supplies	$7.95
1044490	Spangler'S Ace Hardware	Supplies	$23.92
1044490	Spangler'S Ace Hardware	Supplies	$47.03
1044490	Spangler'S Ace Hardware	Supplies	$17.58
1044490	Spangler'S Ace Hardware	Supplies	$7.64
1044490	Spangler'S Ace Hardware	Supplies	$8.36
1044490	Spangler'S Ace Hardware	Supplies	$5.93
1044490	Spangler'S Ace Hardware	Supplies	$18.68
1044490	Spangler'S Ace Hardware	Supplies	$15.99
1044490	Spangler'S Ace Hardware	Supplies	$47.18
1044490	Spangler'S Ace Hardware	Supplies	$12.48
1044490	Spangler'S Ace Hardware	Supplies	$15.29
1044490	Spangler'S Ace Hardware	Supplies	$18.41
1044490	Spangler'S Ace Hardware	Supplies	$6.29
1044490	Spangler'S Ace Hardware	Supplies	$17.30
1044490	Spangler'S Ace Hardware	Supplies	$43.87
1044490	Spangler'S Ace Hardware	Supplies	$4.19
1044490	Spangler'S Ace Hardware	Supplies	$1.60
1044490	Spangler'S Ace Hardware	Supplies	$0.59
1044490	Spangler'S Ace Hardware	Supplies	$2.20
1044490	Spangler'S Ace Hardware	Supplies	$30.25
1044490	Spangler'S Ace Hardware	Supplies	$11.98
1044490	Spangler'S Ace Hardware	Supplies	$7.99
1044490	Spangler'S Ace Hardware	Supplies	$17.61
1044490	Spangler'S Ace Hardware	Supplies	$17.09
1044490	Spangler'S Ace Hardware	Supplies	$132.07
1044491	Texsource Inc	Industrial Arts Supplies - Jones	$278.71
1044492	Transply Inc	Maint. Supplies	$424.60
1044493	Triangle Communications Inc	2026-2027 Blanket PO for Triangle Communications, Inc.	$51.07
1044493	Triangle Communications Inc	2026-2027 Blanket PO for Triangle Communications, Inc.	$766.08
1044494	Troup'S Auto And Transmission Repair	Vehicle Inspections	$60.48
1044494	Troup'S Auto And Transmission Repair	Vehicle Inspections	$265.08
1044495	Tyler Technologies Inc	K-12 People,/Performance/Compliance (EduLink) 7/1/26-6/30/27	$17,340.75

Check	Full Name (FL)	Description	Amount
1044496	West York Area School Dist	Emotional Support Services	$204,191.
1044497	Workpartners National Inc.	Workers Compensation Final Audit Policy #WC300-2034758-2025A (7/1/2025 - 7/1/2026)	$4,214.00
1044498	Acia Ltd	Cooler Filters	$1,543.20
1044499	Advance Auto Parts	Battery	$43.90
1044500	Allegheny Intermediate Unit	25/26 SY Transperfect Translation Services - June '26	$5.70
1044501	Arthur J. Gallagher Risk Management Services	Bond-Amy Aumen	$100.00
1044501	Arthur J. Gallagher Risk Management Services	Cyber Liability	$17,165.00
1044502	Carolina Biological Supply Co	Reg. Instructional Supplies - Science (8th)	$47.63
1044502	Carolina Biological Supply Co	Reg. Instructional Supplies - Science (8th)	$16.83
1044503	Columbia Gas	2026/27 Natural Gas	$9,422.34
1044504	Wilda Dipietro	Translation services	$1,758.75
1044505	Direct Energy Business	District Electric	$0.04
1044505	Direct Energy Business	District Electric	$0.04
1044505	Direct Energy Business	District Electric	$0.04
1044505	Direct Energy Business	District Electric	$1.81
1044505	Direct Energy Business	District Electric	$7,327.65
1044505	Direct Energy Business	District Electric	$41,235.26
1044506	Doceo Office Solutions Llc	Remaining Postage for 26-27 Real Estate Tax Bills	$298.10
1044507	Fisher Scientific Company Llc	Reg Instructional Supplies - Science (7th)	$64.44
1044508	Grainger	Mats for under hand sanitizers	$279.84
1044509	H & L Team Sales Inc	Uniforms - Girls' Soccer	$4,880.00
1044510	HACC	TechLink Consortium	$2,000.00
1044511	Honey Run Golf & Country Club	Golf - Use of Course and Range during Season	$2,000.00
1044512	Ixl Learning Inc	27/27 SY Middle School IXL 3 year subscription - 1st payment of 3	$21,093.75
1044512	Ixl Learning Inc	27/27 SY Special Education and ELL 3 year subscription - 1st payment of 3	$8,025.00
1044513	Lifetrack Services Inc	Class of 2027 Graduate Follow Up Survey	$1,080.00
1044514	Lincoln Intermediate Unit # 12	Discovery Education Experience & Mystery Science	$6,100.00
1044514	Lincoln Intermediate Unit # 12	ED Tech Services 7/1/26 - 6/30/27	$16,725.00
1044515	McNees Wallace & Nurick LLC	Legal Services Ending July 31, 2026	$8,162.00
1044516	Medical Decision Logic Inc	26/27 SY - MS & HS BH Works	$5,000.00
1044517	Met-ed	District Electric	$9,897.28
1044517	Met-ed	District Electric	$7,352.04
1044518	Noredink Corp.	26/27 SY Middle School ELA Program	$10,544.63
1044519	Northeastern Girls Volleyball Booster Club	Girls Volleyball - Entry Fee	$400.00
1044520	Out On A Limb Tree Care Inc.	Tree Removal	$3,400.00
1044521	Plaques & Such Llc	Supplies - Athletic Office	$1,348.50
1044522	Quaker City Paper Co	terra glaze	$128.00
1044523	Riddell / All American Sports	Football - Helmet Reconditioning	$249.74
1044524	Rogue Fitness	The Ohio Bar - Graves	$615.60
1044525	Scholastic Inc	26/27 SY Middle School - Scholastic Science World	$711.75
1044525	Scholastic Inc	26/27 SY Scholastic Magazines (Dover Elementary Kdg - 5th)	$1,400.40
1044525	Scholastic Inc	26/27 SY Scholastic Magazines (Leib Elementary Kdg - 5th)	$1,400.40
1044525	Scholastic Inc	26/27 SY Scholastic Magazines (North Salem Elementary Kdg - 5th)	$1,528.80
1044525	Scholastic Inc	26/27 SY Scholastic Magazines (Weigelstown Elementary Kdg - 5th)	$1,400.40

Check	Full Name (FL)	Description	Amount
1044526	Troup'S Auto And Transmission Repair	Trailer Inspections	$177.06
1044527	USA Today LocaliQ	Advertising	$92.80
1044528	Veritiv Operating Company	custodial supplies	$1,310.87
1044528	Veritiv Operating Company	trash liners	$2,048.79
1044529	Joseph Wallace	26/27 SY - Title IV Safe and Healthy CPR/First Aid Training	$1,600.00
1044529	Joseph Wallace	Nurse BLS First Aid / CPR training	$375.00
1044529	Joseph Wallace	PCA CPR / FIrst Aid	$975.00
1044530	A M Communications Solutions Inc.	Real Estate Tax Exoneration	$44.77
1044531	AED Superstore	Equipment - Athletic Trainer	$50.15
1044532	Beshore & Koller Inc	Vehicle Inspection, Repair & Maint.	$288.71
1044532	Beshore & Koller Inc	Vehicle Inspection, Repair & Maint.	$88.40
1044532	Beshore & Koller Inc	Vehicle Inspection, Repair & Maint.	($5.34)
1044533	Carolina Biological Supply Co	Science Supplies - Spahr,(Millers Class)	$478.27
1044533	Carolina Biological Supply Co	Science Supplies - Spahr,(Millers Class)	$1,180.80
1044534	Tessarae Carter	Childcare Services	$95.00
1044535	Cm Regent Llc	Income Protection - 2026-27 Blanket	$551.62
1044536	Cm Regent Llc	Life Insurance 2026-27 Blanket	$2,015.87
1044537	Dallastown Girls Volleyball	Girls' Volleyball - Entry Fee	$600.00
1044538	Earlbeck Corporation, Dba Earlbeck Gas	Cylinder Gas Order & Prepaid Rental Fee	$2,130.50
1044538	Earlbeck Corporation, Dba Earlbeck Gas	Cylinder Gas Order & Prepaid Rental Fee	($427.49)
1044539	Flinn Scientific Inc	Science Supplies - Spahr & Strasbaugh	$1,684.13
1044539	Flinn Scientific Inc	Science Supplies - Brandstadter	$458.98
1044540	Giant Food Stores Inc	Principal's fund - opening day	$52.24
1044541	K.C. Schaefer Supply Co. Inc	Ag Ed Supplies - Marsh	$1,104.15
1044542	Karah Molesevich	Psychological Testing and Translation	$3,738.00
1044543	Kleppers Key Shop Inc	Supplies	$115.50
1044544	Lincoln Intermediate Unit # 12	Wan Connections 7/1/26 - 12/31/26	$13,291.68
1044544	Lincoln Intermediate Unit # 12	Job Coaching	$775.00
1044545	Nrg Business Marketing	Natural Gas	$93.11
1044545	Nrg Business Marketing	Natural Gas	$688.39
1044545	Nrg Business Marketing	Natural Gas	$251.33
1044545	Nrg Business Marketing	Natural Gas	$851.21
1044545	Nrg Business Marketing	Natural Gas	$855.07
1044545	Nrg Business Marketing	Natural Gas	$0.00
1044545	Nrg Business Marketing	Natural Gas	$2,679.28
1044546	Paddletown LLC	Real Estate Tax Exoneration	$361.48
1044547	PMEA	PMEA Membership Dues - Renewal for 2026-27 - Choral & Band Directors	$150.00
1044547	PMEA	PMEA Membership Dues - Renewal for 2026-27 - Choral & Band Directors	$150.00
1044548	Quaker City Paper Co	Bar throttle repair	$484.37
1044548	Quaker City Paper Co	repairs on Orbitol	$1,185.30
1044549	River Valley Landscapes Inc	Mulch-Elementary Schools	$19,750.00
1044550	South Western Athletic Dept	Girls Wrestling - Entry Fee	$750.00
1044551	Specialized Education Of Pennsylvania Inc.	2025-26 SY Invoice #INV248800 Secondary Special Ed Students placed at Alt Ed program	$6,462.00

Check	Full Name (FL)	Description	Amount
1044551	Specialized Education Of Pennsylvania Inc.	2025-26 SY Invoice #INV248341 Elem & Secondary Special Ed Students placed at Alt Ed program	$15,449.00
1044552	Spring Grove Area School Dist	Mainstreaming Services	$8,496.15
1044553	David & Holly Stephens	Real Estate Tax Exoneration	$11.27
1044554	Stukent, Inc.	BIM120 Penn College Dual Enrollment Course - Ural	$594.93
1044555	Christopher & Diane Tucci	Real Estate Tax Exoneration	$20.61
1044556	Unified Door And Hardware Group, Llc	Hardware	$3,975.00
1044557	W B Mason Co Inc	Bulk Toilet Paper - District	$3,877.50
1044558	Warwick Cross Country Parents' Association, Inc.	Cross Country - Entry Fee	$260.00
1044559	Wellspan Medical Group	Asst. Athletic Trainer	$2,870.00
1044560	York County School Of Tech	Regular/Learning Support	$136,454.
1044560	York County School Of Tech	Girls Wrestling - Entry Fee	$250.00
9000000198	Hawk Ridge Systems, Llc	Solidworks	$1,500.00
9000000199	Trebron Security Llc	Firewall Services	$9,800.00
9000000200	Emily Bentzel	Tuition Reimbursement 2026-2027	$435.00
9000000201	Nicole Campbell	Tuition Reimbursement 2026-2027	$672.00
9000000202	Amanda Renfrew	Tuition Reimbursement 2026-2027	$672.00
9000000203	Cailey Shimko	Tuition Reimbursement 2025-2026	$1,635.00
9000000204	E & B Transportation	2026-2027 Blanket PO for E&B Transportation - Special Needs Vans	$30,198.90
9000000205	Penn Waste Inc	District Trash	$4,148.52
9000000205	Penn Waste Inc	Trash Rental-MS	$152.10
9000000206	Turnitin Llc	Feedback Studio Enterprise License	$7,872.80
9000000207	Jacqueline Becker	Monthly Mileage	$51.11
9000000207	Jacqueline Becker	Monthly Mileage 26/27	$16.82
9000000208	Brooke Depatto	Tuition Reimbursement 2026-2027	$2,550.00
9000000209	Russell Moon	Monthly Mileage 26/27	$73.44
9000000209	Russell Moon	Monthly Mileage	$74.39
9000000210	Mcgraw Hill Llc	Personal Finance Curriculum Books	$763.56
9000000210	Mcgraw Hill Llc	Personal Finance Curriculum Books	$9,544.50
9000000211	F & S Transportation Inc	2026-2027 Blanket PO for F&S Transportation - Special Needs Vans	$7,215.25
9000000212	Securly Inc.	Web Filtering	$11,165.00
9000000213	Wellspan Occupational Health	New Hire Physicals and TB Tests	$403.00
9000000213	Wellspan Occupational Health	New Hire Physicals and TB Tests	$133.00
9000000213	Wellspan Occupational Health	New Hire Physicals and TB Tests	$324.00
9000000213	Wellspan Occupational Health	New Hire Physicals and TB Tests	$190.00
9000000214	Nathan Blass	Tuition Reimbursement 2026-2027	$420.00
9000000215	Kaitlyn Dickhut	Travel Expense	$191.40
9000000216	Claire Wang	Tuition Reimbursement 2026-2027	$2,089.50
9000000217	Heather Zimmerman	Tuition Reimbursement 2026-2027	$1,680.00
9000000217	Heather Zimmerman	Tuition Reimbursement 2026-2027	$1,680.00
9000000217	Heather Zimmerman	Tuition Reimbursement 2026-2027	$1,680.00

Total $1,725,258.25

Check	Full Name (FL)	Description	Amount
4784	Amazon.com	Amazon_PBIS	$270.34
4785	Amazon.com	supplies	$129.99
4786	Amazon.com	supplies	$355.95
4787	Amazon.com	Guidance Office Supplies	$12.99
4788	Amazon.com	Ag Mechanic Supplies - Bowen	($7.79)
4789	Amazon.com	Industrial Arts Supplies- Shoemaker	$308.51
4790	Amazon.com	MS Business Lab Equipment - Kennedy	$10,619.10
4791	Amazon.com	CTE Supplies - Business Department	$767.55
4792	Amazon.com	CTE Supplies	$1,018.18
4793	Amazon.com	CTE Supplies	$16.99
4794	Amazon.com	Business Ed Supplies - Russo	$25.87
4795	Amazon.com	Business Ed Supplies - Russo	$15.99
4796	Amazon.com	Business Ed Supplies - Russo	$29.27
4797	Amazon.com	Business Ed Supplies - Russo	$25.48
4798	Amazon.com	Office Supplies	$12.36
4799	Amazon.com	pencils, art supplies, notebook paper, folders, crayons	($26.05)
4800	Amazon.com	Beginning of the year supplies	$48.92
4801	Amazon.com	Beginning of the year supplies	$149.90
4802	Amazon.com	Beginning of the year supplies	$119.99
4803	Amazon.com	Beginning of the year supplies	$1,729.50
4804	Amazon.com	beginning of the year supplies	$60.00
4805	Amazon.com	General Supplies for Athletic Office and Athletic Trainers	$151.26
4806	Amazon.com	General Supplies for Athletic Office and Athletic Trainers	$241.20
4807	Amazon.com	Equipment - Wrestling	$1,184.44
4808	Amazon.com	Equipment - Girls' Volleyball	$271.98
4809	Amazon.com	Equipment - Swimming	$23.99
4810	Amazon.com	Equipment - Track and Field	$344.26
4811	Amazon.com	Equipment - Cross Country	$47.99
4812	Amazon.com	Equipment - Cross Country	$50.45
4813	Amazon.com	Supplies	$616.09
4814	Amazon.com	Supplies	($85.32)
4815	Amazon.com	Address Labels	$16.15
4816	Amazon.com	Popsicles for Popsicles with the Principal	$92.16
4817	Amazon.com	Gen Supplies - Science 8th grade	$65.98
4818	Amazon.com	Gen Supplies - Science 8th grade	$95.97
4819	Amazon.com	Gen Supplies - Science 8th grade	$332.52
4820	Amazon.com	Gen Supplies - Science 8th grade	$318.44
4821	Amazon.com	Gen Supplies - Science 7th grade	$28.27
4822	Amazon.com	Gen Supplies - Science (6th grade)	$121.01
4823	Amazon.com	Gen Supplies - Science (6th grade)	$689.91
4824	Amazon.com	Reg Inst Supplies - MS ELA Dept.	$443.67
4825	Amazon.com	Reg Inst Supplies - MS Social Studies	$13.96
4826	Amazon.com	Reg Inst Supplies - MS Social Studies	$303.96
4827	Amazon.com	Reg Inst Supplies - MS Social Studies	$300.63
4828	Amazon.com	Principals Svc Supplies	$14.99
4829	Amazon.com	Reg Inst Supplies - Math Dept	$64.32
4830	Amazon.com	Reg Inst Supplies - Math Dept	$79.99
4831	Amazon.com	Reg Inst Supplies - Math Dept	$203.55
4832	Amazon.com	26/27 SY HS Nursing Supplies	$52.14

Check	Full Name (FL)	Description	Amount
4833	Amazon.com	26/27 SY HS Nursing Supplies	$35.18
4834	Amazon.com	26/27 SY HS Nursing Supplies	$493.05
4835	Amazon.com	26/27 SY Mystery Science Supplies	$147.60
4836	Amazon.com	26/27 SY Mystery Science Supplies	$152.56
4837	Amazon.com	26/27 SY Mystery Science Supplies	$44.99
4838	Amazon.com	26/27 SY Mystery Science Supplies	$184.54
4839	Amazon.com	26/27 SY Mystery Science Supplies	$99.90
4840	Amazon.com	26/27 SY Mystery Science Supplies	$69.93
4841	Amazon.com	26/27 SY Mystery Science Supplies	$785.74
4842	Amazon.com	26/27 SY Mystery Science Supplies	$1,584.49
4843	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$102.36
4844	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$215.92
4845	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$35.25
4846	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$548.10
4847	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$59.00
4848	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$364.02
4849	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$1,139.73
4850	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$1,561.93
4851	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$148.18
4852	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$63.69
4853	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$194.00
4854	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$61.74
4855	Amazon.com	26/27 SY Mystery Science Replenishment Supplies	$274.17
4856	Amazon.com	26/27 SY Ag Seedling Supplies	$71.99
4857	Amazon.com	26/27 SY Ag Seedling Supplies	$60.00
4858	Amazon.com	26/27 SY Ag Seedling Supplies	$56.77
4859	Amazon.com	26/27 SY Ag Seedling Supplies	$106.81
4860	Amazon.com	26/27 SY Ag Seedling Supplies	$471.36
4861	Amazon.com	26/27 SY Ag Seedling Supplies	$1,219.43
4862	Amazon.com	AS Books	$57.99
4863	American Heart Assoc	CPR Certification/Training for Coaches	$467.46
4864	Amscope	Ag Ed Equipment (Perkins) - Marsh	$3,283.09
4865	Backblaze Inc	Cloud Storage CC #6965	$240.86
4866	Blick Art Materials	Blick_Art	$174.59
4867	Colt Plumbing Specialties	Plumbing Supplies CC#8091	$1,383.55
4868	DollarFine	GA SkillsUSA Rental Car Parking Violation	$127.00
4869	Guernsey Office Products Inc	colored paper	$344.18
4870	J & W Hardware, Inc.	Knife Sharpening CC#8091	$792.00
4871	Linkedin Corporation	Advertising CC#6908	$521.20
4872	Linkedin Corporation	Advertising CC#6908	$292.40
4873	Lowe's	Supplies	$873.12
4874	Lowe's	Supplies	$44.28
4875	Lowe's	Supplies	$38.98
4876	Lowe's	Supplies	$149.00
4877	Lowe's	Supplies	$196.52
4878	Mosyle Corporation	Subscription CC #6965	$24,503.00

Check	Full Name (FL)	Description	Amount
4879	Pennsylvania Principals Association	Registration for Jody Wickenheiser - Book Study	$149.00
4880	Pitney Bowes	Postage Meter Lease Agreement	$449.10
4881	R F Fager Company	Supplies	$132.30
4882	R F Fager Company	Supplies	$7.73
4883	R F Fager Company	Supplies	$848.51
4884	R F Fager Company	Supplies	$22.96
4885	R F Fager Company	Supplies	$126.79
4886	R F Fager Company	Supplies	$66.58
4887	R F Fager Company	Supplies	$71.81
4888	R F Fager Company	Supplies	$834.70
4889	R F Fager Company	Supplies	$1,740.88
4890	R F Fager Company	Supplies	$89.79
4891	R F Fager Company	Supplies	$150.06
4892	R F Fager Company	Supplies	$89.97
4893	R F Fager Company	Supplies	$15.46
4894	Read Naturally	Read Live Licenses	$2,080.00
4895	River City Supply LLC	BBC Little Buddy ll Conveyor Dryer 120 Volt - A. Jones	$2,999.00
4896	Sangoma Us Inc.	Cyber Phone CC #6965	$35.81
4897	School Nutrition Assoc - Depository	SNAPA Annual Conference Registration	$104.00
4898	School Psych A I, Byron Mcclure	Psych Licenses	$700.00
4899	Sherwin-williams Co	Paint CC#8091	($52.45)
4900	Smartsign Store	Toughtag Parking Hang Tag 3x5	$455.10
4901	Supplyhouse Llc	Heater CC#6965	$109.56
4902	Uline Inc	Uline_Benches	$700.96
4903	Wal-mart	Industrial Arts Nikon Teleconverter (Perkins) - Shoemaker	$2,167.76
4904	Wal-mart	Classroom Supplies	$37.40
4905	Zoro Tools, Inc.	Supplies CC#6965	$191.34
4906	Zoro Tools, Inc.	Supplies CC#6965	$16.49
			Total $79,949.26

Check	Full Name (FL)	Description	Amount
3888	Commonwealth Of Pa-State Withholding	1STAT - STATE TAX W/H for 08.07.26 Payroll	$26,234.47
3889	Dover Area Education Assoc	5DUPF - UNION DUES PROFESSIONAL for 08.07.26 Payroll	$6,710.64
3890	Dover Eagle Foundation	5DEAG - DOVER EAGLE FOUNDATION for 08.07.26 Payroll	$35.00
3891	Pa Department Of Revenue	9WGMS - WAGE GARNISHMENT MISC for 08.07.26 Payroll	$134.74
3892	Penserv Plan Services Inc	4AN - TAX-SHELTERED ANNUITY for 08.07.26 Payroll	$7,027.00
3893	Penserv Plan Services Inc	4AN% - TAX-SHELTERED ANNUITY % for 08.07.26 Payroll	$936.50
3894	Penserv Plan Services Inc	4ROTH - TAX SHELTERED ANNUITY - ROTH for 08.07.26 Payroll	$5,426.00
3895	United States Treasury	1FED - FEDERAL TAX W/H for 08.07.26 Payroll	$69,958.92
3896	United States Treasury	1FED$ - FED TAX ADD $ AMT W/H for 08.07.26 Payroll	$5,561.48
3897	United States Treasury	1FED% - FED TAX % W/H for 08.07.26 Payroll	$182.00
3898	United States Treasury	1MEDI - MEDICARE for 08.07.26 Payroll	$12,395.82
3899	United States Treasury	1SS - SOCIAL SECURITY for 08.07.26 Payroll	$53,002.48
3900	United States Treasury	1MEDI - Medicare for 08.07.26 Payroll	$12,395.82
3901	United States Treasury	1SS - Social Security for 08.07.26 Payroll	$53,002.48
3902	Voya Financial	2TGV - PSERS TGDC VOYA for 08.07.26 Payroll	$3,938.30
3903	Voya Financial	2DCV7.5% - PA Retirement (Voya) DC 7.5% for 08.07.26 Payroll	$221.43
3904	Voya Financial	2RETEEDC - PA Employee (Voya) DC for 08.07.26 Payroll	$1,584.30
3905	Voya Financial	2DCV - PSERS DCDC VOYA for 08.07.26 Payroll	$59.05
3906	Voya Financial	2TGV - PSERS TGDC VOYA for 08.07.26 Payroll	$3,222.30
3907	Voya Financial	2RETERDC - Employer (Voya) Retirement DC for 08.07.26 Payroll	$1,284.60
3908	Public Sch Employees Retire Sy	2POS - PSERS PURCHASE OF SERVIE for 07.10.2026 Payroll	$61.36
3909	Public Sch Employees Retire Sy	2POS - PSERS PURCHASE OF SERVIE for 07.24.26 Payroll	$61.36
3910	Public Sch Employees Retire Sy	2CTD - PSERS RETIREMENT CONTRIBUTION2 for 07.10.2026 Payroll	$26,487.11
3911	Public Sch Employees Retire Sy	2CTE - PSERS RETIREMENT CONTRIBUTION3 for 07.10.2026 Payroll	$10,115.75
3912	Public Sch Employees Retire Sy	2TGDB - PSERS TG-DB for 07.10.2026 Payroll	$8,058.25
3913	Public Sch Employees Retire Sy	2CTF - PSERS RETIREMENT CONTRIBUTION4 for 07.10.2026 Payroll	$4,265.38
3914	Public Sch Employees Retire Sy	2PSER - PSERS ADJUSTMENT $ for 07.10.2026 Payroll	$93.50
3915	Public Sch Employees Retire Sy	2RETEEDB - PA Employee (PSERS) DB for 07.10.2026 Payroll	$13,231.46
3916	Public Sch Employees Retire Sy	2CTD - PSERS RETIREMENT CONTRIBUTION2 for 07.24.26 Payroll	$26,771.01
3917	Public Sch Employees Retire Sy	2CTE - PSERS RETIREMENT CONTRIBUTION3 for 07.24.26 Payroll	$9,986.20
3918	Public Sch Employees Retire Sy	2TGDB - PSERS TG-DB for 07.24.26 Payroll	$8,134.77
3919	Public Sch Employees Retire Sy	2CTF - PSERS RETIREMENT CONTRIBUTION4 for 07.24.26 Payroll	$4,049.96
3920	Public Sch Employees Retire Sy	2PSER - PSERS ADJUSTMENT $ for 07.24.26 Payroll	$93.50
3921	Public Sch Employees Retire Sy	2RETEEDB - PA Employee (PSERS) DB for 07.24.26 Payroll	$13,339.36
3922	Public Sch Employees Retire Sy	MISC ADJUSTMENT	$180.35
3923	Commonwealth Of Pa-State Withholding	1STAT - STATE TAX W/H for 08.21.26 Payroll	$31,919.95
3924	Dover Eagle Foundation	5DEAG - DOVER EAGLE FOUNDATION for 08.21.26 Payroll	$55.00

General Fund - Payroll Checks dated 08/01/26-08/31/26

Check	Full Name (FL)	Description	Amount
3925	Pa Department Of Revenue	9WGMS - WAGE GARNISHMENT MISC for 08.21.26 Payroll	$472.31
3926	Penserv Plan Services Inc	4AN - TAX-SHELTERED ANNUITY for 08.21.26 Payroll	$6,762.00
3927	Penserv Plan Services Inc	4AN% - TAX-SHELTERED ANNUITY % for 08.21.26 Payroll	$1,002.72
3928	Penserv Plan Services Inc	4ROTH - TAX SHELTERED ANNUITY - ROTH for 08.21.26 Payroll	$7,066.00
3929	United States Treasury	1FED - FEDERAL TAX W/H for 08.21.26 Payroll	$82,898.70
3930	United States Treasury	1FED$ - FED TAX ADD $ AMT W/H for 08.21.26 Payroll	$6,493.63
3931	United States Treasury	1FED% - FED TAX % W/H for 08.21.26 Payroll	$16.24
3932	United States Treasury	1MEDI - MEDICARE for 08.21.26 Payroll	$15,081.06
3933	United States Treasury	1SS - SOCIAL SECURITY for 08.21.26 Payroll	$64,484.51
3934	United States Treasury	1MEDI - Medicare for 08.21.26 Payroll	$15,081.06
3935	United States Treasury	1SS - Social Security for 08.21.26 Payroll	$64,484.51
3936	Voya Financial	2RETEEDC - PA Employee (Voya) DC for 08.21.26 Payroll	$7,832.33
3937	Voya Financial	2RETERDC - Employer (Voya) Retirement DC for 08.21.26 Payroll	$6,243.36
3938	Penserv Plan Services Inc	403B - MITZEL	$900.00
3939	Penserv Plan Services Inc	403B - MITZEL	$1,000.00
		Total	**$700,036.03**

Student Activity Fund - Checks dated 08/01/26-08/31/26

Check	Full Name (FL)	Description	Amount
815392	Dover Area School District	SkillsUSA - Invoice 2512700003	$1,977.14
815393	Dover Area School District	SADD - Invoice #2512600063	$525.00
815393	Dover Area School District	Student Council - Invoice# 2512700004	$594.00
815393	Dover Area School District	MS SC - Invoice 2512700005	$113.56
815394	Dramatic Publishing	ASP - Fall Play Supplies	$930.30
9000000012	Robert Eshbach	Advisor Reimbursement	$9.99
		Total	**$4,149.99**

DOVER AREA SCHOOL DISTRICT
TREASURER'S REPORT
FOR THE MONTH OF AUGUST 2026

GENERAL FUND

MAIN OPERATING ACCOUNTS (AP & PR) - MEMBERS FIRST		
Beginning Balance		4,564,074.66
Receipts and Deposits:		
County of York-Realty Transfer Tax	62,025.21	
County of York-Delinquent Real Estate Taxes	68,587.14	
EIT	1,086,900.92	
State/Federal Subsidy Payments		
Basic Education Subsidy	2,087,460.00	
Property tax Relief Subsidy	1,113,415.00	
Transportation Subsidy	169,633.00	
Social Security Reimbursement	405,168.09	
Vocational Subsidy	62,595.00	
In Lieu of Taxes	579.60	
Federal Grants	112,132.31	
Eagle Eatery/CAB Sales	442.00	
Activities Fund/PTO Reimbursement	5,699.70	
FSF Reimbursements	57,612.89	
Student Class Fees/Obligations	4,320.00	
Restitution	456.96	
Misc. Reimbursements/Refunds	11,601.70	
Rentals	4,657.50	
Athletics	4,486.75	
Tuition	67,704.02	
Tuition Reimbursement	4,413.75	
Transportation Reimbursement	5,646.88	
DEF	65.00	
Real Estate Taxes	2,767,688.48	
Interest	903.93	
Total Receipts and Deposits		8,104,195.83
Disbursements:		
Payroll	(2,009,812.81)	
Checks Disbursed	(981,932.02)	
Transfer to PSDLAF	(4,000,000.00)	
Wire Transfers/ACH Debits	(742,548.45)	
Bank/Merchant Fees/NSFs	(820.17)	
Total Disbursements		(7,735,113.45)
Ending Balance:		4,933,157.04
SUMMARY - OPERATING		
Cash - Operating Accounts (AP & PR), .20%		4,933,157.04

OTHER GENERAL FUNDS ACCOUNTS - PSDLAF

Beginning Balance		2,793,484.53
Receipts and Deposits:		
Transferred from Member's First	4,000,000.00	
Interest	9,518.00	
Total Receipts and Deposits		4,009,518.00
Disbursements:		
Transferred to Members First	-	
Purchase Card Payment	(79,949.26)	
Total Disbursements		(79,949.26)
Ending Balance:		6,723,053.27

SUMMARY - GENERAL FUND

PSDMAX, 3.457% average	6,662,661.92
PSDLAF Flex, 3.590% average	32,636.72
PSDLAF Flex, 3.590% average	27,754.63
SUBTOTAL	6,723,053.27
Members First, (Main operating from above)	4,933,157.04
TOTAL GENERAL FUND	11,656,210.31

CAPITAL RESERVE FUND

MEMBERS FIRST & PSDLAF

Beginning Balance:		8,072,123.85
Receipts and Deposits:		
Interest	17,999.33	
Total Receipts and Deposits		17,999.33
Disbursements:		
Checks Disbursed	-	
Total Disbursements		-
Ending Balance:		8,090,123.18

SUMMARY

Members First, .10%	47,027.08
PSDMAX, 3.457% average	4,112,519.63
PSDLAF Flex, 3.590% average	2,007,676.47
PSDLAF CDs, Various Rates, 10-9-26 maturity	1,682,900.00
PSDLAF CDs, Various Rates, 10-20-26 maturity	240,000.00
TOTAL	8,090,123.18

FOOD SERVICE FUND

MEMBERS FIRST & PSDLAF		
Beginning Balance		1,250,274.87
Receipts and Deposits:		
On-line deposits	26,467.75	
Cash deposits	9,496.12	
NSLP	-	
Interest	2,302.74	
Total Receipts and Deposits		38,266.61
Disbursements:		
Checks Disbursed	(81,124.21)	
Total Disbursements		(81,124.21)
Ending Balance:		1,207,417.27
SUMMARY		
Members First, .20%		447,231.41
PSDMAX, 3.457% average		760,185.86
TOTAL		1,207,417.27

HIGH SCHOOL STUDENT ACTIVITIES FUND

MEMBERS FIRST & PSDLAF		
Beginning Balance		188,962.78
Receipts and Deposits:		
Yearbook	4,915.19	
Student Council	140.00	
DECA	752.26	
Interest	222.78	
Total Receipts and Deposits		6,030.23
Disbursements:		
Checks	(4,238.99)	
Total Disbursements		(4,238.99)
Ending Balance:		190,754.02
SUMMARY INCLUDING INVESTMENTS		
Members First, .15%		119,819.12
PSDMAX, 3.457% average		70,934.90
TOTAL		190,754.02

Dover Area School District
2026-27 General Fund Year-To-Date Revenue Report for the Period Ending August 31, 2026
With Comparative Actual Amounts for Fiscal Year Ended 2026

	2025-2026			2026-2027		
	Budgeted Revenue	**YTD Revenue**	**% of Budget Received**	**Budgeted Revenue**	**YTD Revenue**	**% of Budget Received**
LOCAL REVENUE						
Current Real Estate Taxes	29,393,433	3,400,100	11.57%	30,606,001	2,785,769	9.10%
Interim Real Estate Taxes	376,220	61,887	16.45%	328,200	3,222	0.98%
Public Utility Real Estate Taxes	31,600	-	0.00%	34,800	-	0.00%
Payment in Lieu of Taxes	800	580	72.50%	600	580	96.67%
Earned Income Taxes	7,017,000	663,515	9.46%	7,525,000	1,096,182	14.57%
Real Estate Transfer Taxes	700,000	68,066	9.72%	700,000	63,291	9.04%
Delinquent Real Estate Taxes	640,000	103,498	16.17%	650,000	-	0.00%
Delinquent Earned Income Taxes	100,000	31,146	31.15%	130,000	10,078	7.75%
Interest On Investments	950,000	75,668	7.97%	700,000	30,580	4.37%
Athletic Gate Receipts	55,500	4,465	8.05%	55,000	250	0.45%
Student Store	17,000	3,072	18.07%	20,500	3,964	19.34%
Student Fees	35,000	9,525	27.21%	28,000	9,038	32.28%
Ad Sales	150	-	0.00%	500	-	0.00%
Other Student Income	8,500	121	1.42%	8,200	1	0.01%
Fed Rev Received - Other LEAs	140,000	-	0.00%	80,000	-	0.00%
Fed Rev Passed Thru IU	835,100	-	0.00%	800,000	-	0.00%
Rentals	50,000	-	0.00%	60,000	5,143	8.57%
Regular Day Tuition	16,750	-	0.00%	13,000	2,197	16.90%
Revenue from other LEAs	5,000	-	0.00%	75,000	-	0.00%
Trans Svcs Provided by LEAs	5,000	-	0.00%	20,000	-	0.00%
Fines, Truancy, Other Fees	43,000	-	0.00%	21,000	547	2.60%
Energy Rebates	-	-	0.00%	-	-	0.00%
Misc.	7,750	2,936	37.88%	8,000	702	8.78%
Total Local Revenue	*40,427,803*	*4,424,579*	*10.94%*	*41,863,801*	*4,011,544*	*9.58%*

Dover Area School District
2026-27 General Fund Year-To-Date Revenue Report for the Period Ending August 31, 2026
With Comparative Actual Amounts for Fiscal Year Ended 2026

	2025-2026			2026-2027		
	Budgeted Revenue	YTD Revenue	% of Budget Received	Budgeted Revenue	YTD Revenue	% of Budget Received
STATE REVENUE						
Basic Ed Subsidy - Formula	14,184,900	-	0.00%	14,038,275	2,087,460	14.87%
Tuition From the State	100,000	-	0.00%	125,000	-	0.00%
Charter School Reimbursement	301,450	-	0.00%	-	-	0.00%
Vocational Ed Subsidy	416,700	-	0.00%	403,000	62,595	15.53%
Special Ed Subsidy	3,013,800	-	0.00%	3,203,300	481,810	15.04%
Transportation	1,745,267	-	0.00%	1,831,050	169,633	9.26%
Rental Sinking Fund	1,213,250	-	0.00%	1,165,050	-	0.00%
Health Services	60,000	-	0.00%	60,000	-	0.00%
Property Tax Relief	2,227,596	1,113,798	50.00%	2,226,830	1,113,415	50.00%
PA Block Grant/Ready to Learn	1,666,860		0.00%	2,219,818	-	0.00%
SS Reimbursement	1,305,340	-	0.00%	1,360,000	-	0.00%
Retirement Reimbursement	6,040,500	-	0.00%	6,191,700	-	0.00%
Feminine Hygiene Products Grant	-	-	0.00%	-	-	0.00%
Supplemental Equipment Grant	-	-	0.00%	-	-	0.00%
PCCD Grants	71,146	30,658	43.09%	-	-	0.00%
Total State Revenue	*32,346,809*	*1,144,456*	*3.54%*	*32,824,023*	*3,914,913*	*11.93%*
FEDERAL REVENUE						
Title I	598,350	-	0.00%	589,643	39,310	6.67%
Title II	86,950	-	0.00%	88,713	5,914	6.67%
Title III	-	-	0.00%	-	-	0.00%
Title IV	46,025	-	0.00%	44,470	2,965	6.67%
Vocation Education	41,300	-	0.00%	41,300	7,039	17.04%
Other Cares Funding	-	-	0.00%	-	-	0.00%
ACCESS	635,000	-	0.00%	435,000	-	0.00%
Total Federal Revenue	*1,407,625*	*-*	*0.00%*	*1,199,126*	*55,228*	*4.61%*
OTHER REVENUE						
Extended Financing	302,500	-	0.00%	-	-	0.00%
Sale of Fixed Assets	10,000	-	0.00%	5,000	-	0.00%
Total Other Revenue	*312,500*	*-*	*0.00%*	*5,000*	*-*	*0.00%*

Dover Area School District
2026-27 General Fund Year-To-Date Revenue Report for the Period Ending August 31, 2026
With Comparative Actual Amounts for Fiscal Year Ended 2026

	2025-2026			2026-2027		
	Budgeted Revenue	YTD Revenue	% of Budget Received	Budgeted Revenue	YTD Revenue	% of Budget Received
TOTAL REVENUE	**74,494,737**	**5,569,035**	**7.48%**	**75,891,950**	**7,981,685**	**10.52%**

Dover Area School District
2026-27 General Fund Year-To-Date Expenditure Report for the Period Ending August 31, 2026
With Comparative Actual Amounts for Fiscal Year Ended 2026

	2025-2026			2026-2027		
	Budgeted Expenditures	**YTD Exp.**	**% of Budget Expended**	**Budgeted Expenditures**	**YTD Exp.**	**% of Budget Expended**
BY FUNCTION:						
1000 - Instruction						
1100 Regular Instruction	28,400,932	1,495,316	5.27%	29,128,217	1,331,581	4.57%
1200 Special Education	13,906,155	570,510	4.10%	15,511,980	314,505	2.03%
1300 Vocational Education	3,625,056	426,563	11.77%	3,974,490	411,502	10.35%
1400 Other Instructional Programs	241,004	5,467	2.27%	299,151	534	0.18%
1500 Non-Public Programs	8,700	-	0.00%	13,000	-	0.00%
Total Instruction	*46,181,847*	*2,497,856*	*5.41%*	*48,926,838*	*2,058,122*	*4.21%*
2000 - Support Services						
2100 Pupil Personnel	1,980,662	107,348	5.42%	2,024,809	128,442	6.34%
2200 Instructional Staff Support	2,849,525	317,031	11.13%	2,511,530	394,612	15.71%
2300 Administration	3,329,329	446,566	13.41%	3,382,131	432,960	12.80%
2400 Pupil Health Services	896,773	51,947	5.79%	1,067,584	28,096	2.63%
2500 Business Services	829,305	134,471	16.21%	848,105	122,428	14.44%
2600 Plant Services	5,578,356	855,983	15.34%	6,444,598	939,336	14.58%
2700 Student Transportation	4,299,182	30,430	0.71%	4,604,458	57,028	1.24%
2800 Central Support Svcs	747,857	101,195	13.53%	728,051	95,146	13.07%
2900 Other Support Svcs	5,000	-	0.00%	-	-	0.00%
Total Support Services	*20,515,989*	*2,044,971*	*9.97%*	*21,611,266*	*2,198,048*	*10.17%*
3000 - Non-Instructional Services						
3200 Student Activities	1,254,751	114,637	9.14%	1,250,313	150,740	12.06%
3300 Community Services	6,000	21	0.35%	7,700	-	0.00%
Total Non-Instructional Svcs	*1,260,751*	*114,658*	*9.09%*	*1,258,013*	*150,740*	*11.98%*
4000 - Facilities Acquisition, Construction & Improve						
4000 Construction & Improve	-	-	-	-	-	-
Total Facilities Acquisition	-	-	-	-	-	-

Dover Area School District
2026-27 General Fund Year-To-Date Expenditure Report for the Period Ending August 31, 2026
With Comparative Actual Amounts for Fiscal Year Ended 2026

	2025-2026			2026-2027		
	Budgeted Expenditures	**YTD Exp.**	**% of Budget Expended**	**Budgeted Expenditures**	**YTD Exp.**	**% of Budget Expended**
5000 - Other Financing Sources						
5100 Debt Service	8,292,498	517,899	6.25%	8,257,798	536,382	6.50%
Total Other Financing	*8,292,498*	*517,899*	*6.25%*	*8,257,798*	*536,382*	*6.50%*
TOTAL BY FUNCTION	***76,251,085***	***5,175,384***	***6.79%***	***80,053,915***	***4,943,292***	***6.17%***
BY OBJECT:						
100 Salaries	29,903,018	1,591,179	5.32%	30,658,174	1,589,973	5.19%
200 Benefits	19,738,712	1,052,466	5.33%	20,285,407	1,067,666	5.26%
300 Purchased Professional & Technical Services	2,942,305	326,744	11.11%	3,866,806	132,329	3.42%
400 Purchased Property Services	696,249	47,087	6.76%	678,415	48,568	7.16%
500 Other Purchased Services	10,671,530	645,793	6.05%	11,969,015	618,778	5.17%
600 Supplies, Books, Software	3,271,123	900,212	27.52%	3,878,447	884,867	22.81%
700 Equipment	506,085	56,762	11.22%	219,000	18,719	8.55%
800 Other Objects	3,669,297	35,235	0.96%	3,434,073	46,010	1.34%
900 Other Uses of Funds	4,852,766	519,906	10.71%	5,064,578	536,382	10.59%
TOTAL BY OBJECT	***76,251,085***	***5,175,384***	***6.79%***	***80,053,915***	***4,943,292***	***6.17%***

August 2026 Obsolete Items

IMAGE	DESCRIPTION	Can anyone else in the district use this?	If obsolete, why?
	Flash Dryer	No	Broken. Cost of repair greater than cost to replace, and we probably don't need to replace it.
	46 Texts, 2008. "Succeeding in the World of Work." 80 matching textbooks + teacher CDs with copies of worksheets.	No. It may be possible to place on Municibid.	2008. Replaced with updated Personal Finance book and online resources.