COURSE TITLE: Business and Consumer Mathematics

Course Description:
Business and Consumer Mathematics is designed to build upon previous knowledge and skills to solve a variety of arithmetic problems that are commonly found in personal and business financial situations. Students develop the skills necessary to solve mathematical problems, analyze and interpret data, and use data to make sound decisions in business and personal financial situations. Topics include taxation, savings and investments, credit management, cash management, and financial statements.

Potential Certifications/Credentials:
Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)
## Course Scope and Sequence

<table>
<thead>
<tr>
<th>Unit #</th>
<th>Unit Title</th>
<th>Estimated Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Foundational Standards</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Consumer Credit</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Markup and Discounts</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Data Analysis and Reporting</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Payroll</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Interest Rates</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Investments</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Personal Taxes</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Bank Records</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Insurance</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Ratios and Proportions</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Depreciation</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Inventory</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Business Calculations</td>
<td></td>
</tr>
</tbody>
</table>
Unit I: Plans of Instruction

Foundational Standards

Supporting—will be taught throughout the course as needed for the unit.
F1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces.

F2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork.

F3. Explore the range of careers available in the field and investigate their educational requirements, and demonstrate job-seeking skills including resume-writing and interviewing.

F4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway.

F5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

F6. Discuss and demonstrate ways to value diversity.
Unit 2 Title: Consumer Credit

Content Standards

1. Assess the costs associated with making major purchases.
   1a. Calculate sales tax and compute total price with sales tax.
   1b. Compute total purchase price with interest and finance charges added.
   1c. Use data-informed decision-making to identify the costs of obtaining a loan and select the least expensive option.
   1d. Discuss repayment requirements and compute finance charges for single payment loans.
   1e. Calculate and explain installment loan costs.
      *Examples: amount financed, installment price, finance charge, installment payment*
   1f. Compare costs of leasing and buying large-ticket items.

2. Research terms and conditions for at least two major credit cards, compute the costs of financing a purchase over various time periods, and list and describe the advantages and disadvantages of using each card.
   2a. Find and explain the estimated annual percentage rate (APR) for a credit card, using a table.
   2b. Determine which credit card is more economical by calculating and explaining the finance charges and new balance using the average daily balance method.
   2c. Locate and use amortization tables to determine payment, interest, and balance for loans with a variety of interest rates and repayment times.
   2d. Compare and contrast annual and monthly percentage rates for credit cards and loans.
   2e. Compare and contrast the benefits of using a credit card or paying cash for a purchase for both the purchaser and the business.

3. Determine the impact of credit ratings on the cost of goods and services purchased on credit.
   3a. Calculate the components of a monthly mortgage payment including down payment, principal, interest, taxes, and insurance (PITI) and discuss what percentage of a person's income should be set aside for a home purchase.
   3b. Prepare a partial amortization schedule of a mortgage using varying credit ratings.
   3c. Compare the total interest paid on a 15-year and a 30-year mortgage at various credit ratings.
   3d. Compare and contrast interest-only, fixed-rate, and adjustable-rate loans using various credit ratings.
   3e. Explain credit ratings and credit reports and why they are important to consumers.
   3f. Research rights and responsibilities of consumers established by credit legislation.

Unpacked Learning Objectives

Students know:
- Need to know the difference between major and minor purchases.
- What is the purchasing process - long or short-term financing.
● How to determine APR and Interest rate.
● How to compute the total price of a good or service, including sales tax.
● What their interest is.
● What finance charges are.
● How the total purchase price of a good is affected when including interest and finance charges.
● How to compute total purchase prices.
● What loans are and different types of loans.
● How to use critical thinking skills and decision-making to select an appropriate loan.
● To select the least expensive loan option.
● What the repayment requirements are.
● To compute finance charges.
● What single payment loans are.
● How repayment requirements and financing charges affect loans.
● How to calculate installment loans.
● How to determine Interest Rate, Length of the Loan, Credit Terms.
● What a lease is.
● What constitutes large-ticket items.
● The difference between purchasing large-ticket items and leasing such.
● How to compare and contrast.
● What credit is.
● How to calculate interest and APR.
● The difference between various credit card offers.
● What rewards, sign-on bonuses, and more are.
● What credit scores are.
● What is an annual percentage rate (APR).
● The financial instruments that must be disclosed.
● That different credit card options have different financing plans.
● How to use the average daily balance method.
● How to calculate finance charges on a variety of credit cards.
● What amortization tables are.
● How interest and balance relate to repayments.
● What annual percentage rates on credit cards and loans are.
● What monthly percentage rates on credit cards and loans are.
● The differences in paying with a credit card and cash as a buyer.
● The differences in paying with cash or credit card as the seller (or business).
● How credit ratings impact costs of goods and services.
● How credit affects costs of goods and services.
● That buying a home features many factors like down payment, principal interest, taxes and insurance.
• How to set a budget on purchasing a home.
• Purchasing a home is a big financial commitment.
• How to prepare partial amortization schedules.
• How varying credit ratings impact partial amortization.
• Interest rates on 15-year mortgages.
• Interest rates on 30-year mortgages.
• Various credit ratings impact total interest.
• What interest-only loans are.
• What fixed-rate loans are.
• Adjustable-rate loans are.
• Credit report formats and scales.
• Credit ratings and scales.
• The importance of credit ratings and reports
• Relevant legislation pertaining to credit.
• Varying rights and responsibilities of credit holders.

Students are able to:
• Determine the different components that are involved in major purchasing decision making.
• Determine the total cost of a good or service.
• Calculate interest.
• Calculate finance charges.
• Compute total purchase prices accounting for interest and finance charges.
• Compare and contrast loan prices.
• Calculate the total cost of a loan.
• Select the most appropriate loan option presented.
• Explain the obligation of repaying a single-payment loan and the associated charges.
• Compute finance charges on loans.
• Fully discuss and explain single payment loans.
• Calculate installment loan costs.
• Explain installment loan costs.
• Identify the costs of leasing.
• Identify the costs of buying large-ticket items.
• Identify differences in such purchasing methods.
• Compare and contrast the differences between two credit cards
• Calculate the different costs of using a credit card using interest and APR.
• Analyze purchase trends to determine what credit cards to select.
• Create a table displaying the difference APR rates for a credit card.
• Analyze various credit card plans.
● Calculate average daily balances due on credit cards.
● Read amortization tables.
● Calculate interest, payment totals and remaining balances on repayments.
● Calculate annual percentage rates.
● Calculate monthly percentage rates.
● Understand the differences in paying with cash or a credit card as a buyer.
● Understand the differences in paying with cash or a credit card as a seller.
● Analyze how credit ratings affect costs of goods and services.
● Calculate monthly mortgage payment, down payment, principal interest, taxes and insurance.
● Determine what percentage of a person’s income should be used for a home purchase.
● Create partial amortization tables.
● Schedule mortgage payments with varying credit ratings.
● Identify how credit impacts interest rates.
● Identify differences in 15 and 30 year mortgages.
● Identify how credit ratings impact the interest-only, fixed-rate and adjustable-rate loans.
● Analyze a credit report.
● Analyze a credit rating.
● Identify appropriate actions based on rights and responsibilities of credit holders.

Students understand that:

● Many factors go into making a major purchase.
● The more knowledge that is available, the better the decision making will be for the consumer.
● How to compute and understand the difference between sales tax and cost-saving.
● The role of state sales taxes.
● A variety of different loan options exist.
● Loan prices vary based on different options.
● Selecting a loan is an important decision.
● Loans are major financial decisions.
● Single-payment loans have repayment requirements and additional financing charges.
● Installment loans have a variety of costs.
● There is a financial difference between leasing and buying large-ticket items.
● The use of credit cards is dynamic and vary for each individual and situation, with a number of different card programs.
● APR helps you make better choices regarding borrowing money, using credit cards and improving your credit score.
● The price of using a credit card can vary drastically, if not choosing the most economical option.
● Amortization tables impact total payments, interest and balance on loans.
● Monthly and annual percentage rates vary on credit cards and loans.
● An individual payment method, being credit card or cash, has impacts on both the individual and the business.
● Credit ratings impact the cost of goods and services on credit.
- Purchasing a home involves many factors and how to set an appropriate budget
- Amortization schedules vary with different credit ratings.
- The amount of interest paid varies in 15 and 30 year mortgages with various credit ratings.
- Various credit ratings impact interest-only, fixed-rate and adjustable-rate loans.
- Credit reports and ratings have consequences for one’s financial future and wellbeing.
- Consumers have rights and responsibilities for using credit as established by law.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>How do installment loans help consumers purchase big-ticket items?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How does an interest rate affect monthly payments?</td>
</tr>
<tr>
<td></td>
<td>How do principal, interest rate, and loan terms affect loan payments?</td>
</tr>
<tr>
<td></td>
<td>What criteria do you use to compare loan offers to get the best deal?</td>
</tr>
<tr>
<td></td>
<td>How are credit scores determined and what results in high or low credit scores?</td>
</tr>
<tr>
<td></td>
<td>How do credit scores reflect financial decisions people make and the outcomes and consequences of those decisions?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exemplar High Quality Unit Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will be able to compute total costs for a car and house purchase.</td>
</tr>
<tr>
<td>Students will be able to conduct research and choose the best payment option.</td>
</tr>
<tr>
<td>Students will be able to describe how credit ratings and scores impact a person’s purchases.</td>
</tr>
</tbody>
</table>
### Map of Student Learning by Learning Objective

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can assess their knowledge of the different cost variables in making purchases.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Brainstorming Group Discussion Vocabulary Quizlet</td>
<td>ELA: Public speaking: Using a presentation tool such as Google Slides, create a visual presentation that supports the explanation of the cost variables in making purchases. Slides must be appropriate in terms of grammar, usage, and mechanics. MATH: Invite a guest speaker from banks or some financial institutions to give the students an overview of the different cost variables in making purchases, such as banking basics, loans and credit cards, credit problems, etc.</td>
<td>Equipment List by CTE Cluster Link to Helpful Tech Tools</td>
</tr>
</tbody>
</table>

**Equipment:**
- Internet
- Computer
- Whiteboard/Interactive board
- Projector

**Technology & Materials:**
- Equipment List by CTE Cluster
- Link to Helpful Tech Tools
<table>
<thead>
<tr>
<th>Students can demonstrate how to compute total price from knowing the sales tax of goods and services.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th>Deciding Which Car I Can Afford (CFPB)</th>
<th>MATH: Practice with order of operations using fractions, decimals and percent. Solve percentage problems including calculating sales tax, tips, discounts, and etc.</th>
<th>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can compute the total purchase price for an item with interest and finance charges added in.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Deciding Which Car I Can Afford (CFPB)</td>
<td>MATH: In a project, the students will plan to finance a car purchase. Through the project, they will compare purchase prices, make a budget and calculate interest, finance charges and everything associated with the purchase.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can research the best loan option by computing the purchase price and determining the least expensive item.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Deciding Which Car I Can Afford (CFPB)</td>
<td>ELA: Research: Using the Alabama Virtual Library and EBSCOhost, students will find one peer-reviewed journal on the best loan option. Students will read</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator</td>
</tr>
<tr>
<td>Students can fully discuss repayment requirements and compute the financial charges for single payment loans.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>How to Calculate Loan Payments and Costs (Bankrate) Loan Payment Calculator</td>
<td>MATH: Students can define principal, interest, fees and use loan payment formula to calculate monthly payment for different types of loans. They will have an overview of different loan calculators available.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Students can fully calculate and explain installment loan costs.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Understanding Auto Loans (NGPF)</td>
<td>MATH: Use tables to explain installment loan costs in an auto loan, including special offers as well as standard factors, such as down payment, APR and term.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
</tbody>
</table>

Unit project incorporating all learned skills and concepts.

Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment

and annotate the sources and write a summary of the article.

MATH: Use tables and graphs to compare loan options.

Handouts
<table>
<thead>
<tr>
<th>Students can accurately compare the cost of leasing and buying large-ticket items.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th><strong>Understanding Auto Loans (NGPF)</strong></th>
<th>ELA: Students can write a comparison/contrast paragraph in either the point-by-point method or the subject-by-subject method detailing the similarities and differences between leasing and buying large-ticket items. MATH: The students will be able to calculate the cost of leasing and buying large-ticket items and compare the results by tables and graphs.</th>
<th>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can adequately understand the use and the function of credit cards.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td><strong>How Credit Cards Work (NGPF)</strong></td>
<td>ELA: Research: Using the Alabama Virtual Library and EBSCOHost, students will find one peer-reviewed journal on management plans for common diseases and pests. Students will read and annotate the sources and write a summary of the article. MATH: The students will discuss credit problems, the credit card application process as well how credit cards work.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
</tbody>
</table>
| Students will compute in a table APR for a credit card. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Select A Credit Card (NGPF) | MATH: Use a project to explain how to choose the best credit cards that suit personal needs. Students will learn about annual fee, grace period and rates, and how to calculate APR, penalty fees, perks and rewards. | Internet
Computer
Whiteboard/Interactive board
Projector
Calculator
Handouts |
|---|---|---|---|---|
| Students can interpret the meaning and purchase of APR. | Unit project incorporating all learned skills and concepts. | Formative: Observations of student progress-classwork rubric, class discussions quizzes, enter & exit slips, self-assessment | ELA: Teacher will provide students with three by-mail credit card offers. Students open and evaluate each offer on a chart in order to determine the best option in terms of return and reward. Students will then write a paragraph detailing their best option. Students can then present their best option to the class. | Internet
Computer
Whiteboard/Interactive board
Projector
Calculator
Handouts |
| Students can analyze a variety of credit card options and identify the most economic option. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Select A Credit Card (NGPF) | | |
| Students can effectively locate and use amortization tables to determine total balance and cost on credit cards. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Loan Amortization Schedule Schedule: How to Calculate Accurate Payments (Fundera) | MATH: Divide students into groups with amortization tables and ask them to locate and determine total balance and cost for each | Internet
Computer
Whiteboard/Interactive board
Projector
Calculator |

Alabama State Department of Education, Career and Technical Education/Workforce Development, Plans of Instruction Updated as of Jan 8, 2022
<table>
<thead>
<tr>
<th>Activities</th>
<th>Assessments</th>
<th>Materials/Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can compare and contrast annual and monthly percentage rates on credit cards and loans.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select A Credit Card (NGPF)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ELA: Writing: Using either the point-by-point or subject-by-subject compare/contrast format, write an essay detailing the differences between annual and monthly percentage rates on credit cards and loans. Use this as a guide for the two methods of compare/contrast: NROC Developmental English Foundations.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH: Use tables and graphs to compare annual and monthly percentage rates on credit cards and loans.</td>
<td></td>
</tr>
<tr>
<td>Students can compare and contrast benefits of using a credit card or cash for both the purchaser and the business.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td></td>
<td>Using a Credit Card vs Cash (The Balance) Different Payments (Money Fit)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ELA: Students create a one-pager assignment illustrating the differences between using credit cards or cash. Infographics can</td>
<td></td>
</tr>
</tbody>
</table>

Alabama State Department of Education, Career and Technical Education/Workforce Development, Plans of Instruction Updated as of Jan 8, 2022
<table>
<thead>
<tr>
<th>Students can determine the impacts credit ratings have on the cost of goods and services.</th>
<th>Unit project incorporating all learned skills and concepts.</th>
<th><strong>Business Credit Card vs Small Business Loan</strong> (Bankrate)</th>
<th>also be created digitally using Canva.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>MATH: Use a project to let students present their reason to use a credit card or cash when making an investment as an individual or as a business. Compare and contrast the benefits by providing quantitative analysis of the data given.</td>
<td></td>
</tr>
<tr>
<td>Students can determine the cost and budget for buying a home, factoring in all components of the cost.</td>
<td>Unit project incorporating all learned skills and concepts.</td>
<td><strong>Credit (Practical Money Skills)</strong></td>
<td>MATH: Students will be able to solve word problems involving the cost of goods and services by using a credit card with different interest rates. The students will be able to use tables or graphs to demonstrate the impacts credit ratings have on the costs due to the different interest rates.</td>
</tr>
<tr>
<td></td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td><strong>Buy a House (Practical Money Skills)</strong></td>
<td>MATH: Use a project to let students find the average cost of living by renting or buying a home and prepare a budget sheet. They will discuss all the components of the costs in these two methods.</td>
</tr>
<tr>
<td></td>
<td>Unit project incorporating all learned skills and concepts.</td>
<td><strong>Complete Costs of Buying a Home</strong> (Bank Rate)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can prepare a partial amortization schedule of a mortgage with varying credit ratings.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Unit project incorporating all learned skills and concepts.</td>
</tr>
<tr>
<td>Students can compare total interest paid on 15 and 30 year mortgages with various credit ratings.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Unit project incorporating all learned skills and concepts.</td>
</tr>
<tr>
<td>Students can compare and contrast interest-only, fixed-rate and adjustable-rate loans using various credit ratings.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Types of Consumer Credit and Loans (Debt.org) Choosing Between an ARM versus a fixed-rate mortgage (Bankrate)</td>
<td>MATH: Use tables and graphs to compare the differences between interest-only, fixed-rate and adjustable-rate loans with various credit ratings. Determine the best method with the given scenarios.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Students can explain credit ratings and reports as well as the importance of both.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Describing Credit Scores (CFPB) Identifying the Missing Credit Score Category (CFPB)</td>
<td>ELA: Students can make a cartoon using Animaker to explain credit ratings and reports.</td>
</tr>
<tr>
<td>Students can research rights and responsibilities of consumers established by credit legislation.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Credit (Practical Money Skills)</td>
<td>ELA: Research and Presentation: Students will research the rights and responsibilities of consumers established by credit legislation. They will</td>
</tr>
</tbody>
</table>
Unit project incorporating all learned skills and concepts.

Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment

present using a presentation tool such as Google Slides. Students will need to correctly cite sources used from their research on a separate Works Cited slide.

Handouts

### Key Vocabulary

APR, interest, long-term interest rate, short-term interest rate, consumer debt-to-income ratio, budgeting, cost, discounts, taxes, revenue, purchase price, local tax, state tax, sales tax, wholesale sales tax, value-added tax, goods and services tax, good, services, selling price, sales tax rate, total sale amount, interest, finance charge, interest rate, short term loan, long term loan, down payment, secured loan, credit history, principal, single payment loan, installment loan, credit terms, credit score, interest rate, credit bureaus, buying, leasing, shopping, needs, wants, pre-approval loan, depreciation value, residual value, early termination fees, warranties, term, conditions, issuer, fees, sign up bonus, rewards, benefits, compounding, day in a loan, cash advances, balance transfers, fixed APR, variable APR, finance charges, average daily balance method, amortization schedule, amortization calculator, repayment, amount financed, credit card, installment credit plan, revolving credit plan, debit card, credit rating, creditworthiness, the four C’s, mortgage, insurance, payment date, interest payment, principal payment, annual interest rate, fixed rate, adjustable rate loans, credit reporting agencies, lender, borrower, collection agency, co-signer, credit limit, equal credit opportunity act, truth-in-lending law, fair credit reporting act, fair debt collections practices act

### Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Guest speakers from banks/credit unions, mortgage lender, local business owner; field trip to local business

### CTSO Connection:

## Certification/Credential Connection:

<table>
<thead>
<tr>
<th>Certification/Credential Connection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate</td>
</tr>
</tbody>
</table>
Unit 3 Title: Markup and Discounts

Content Standards
4. Interpret different types of discounts and their effects on personal and business expenses.
   4a. Identify various types of discounts.
   4b. Calculate chain, trade, and cash discounts and net selling prices of items using each type of discount.
   4c. Determine the price of products after applying coupons, sales incentives, and/or rebates.

5. Assess and calculate markup or markdown.
   5a. Determine the rate of the markup or markdown.
   5b. Find the cost, markup, or selling price when any two of the three are known.
   5c. Convert markups from cost to selling price or from selling price to cost.

Unpacked Learning Objectives

Students know:
- The different types of discounts.
- Differences in cost, price, and selling price.
- The differences between discounts and mark-up.
- Definition of the different types of discounts.
- The difference between the different discounts.
- When to utilize different discounts.
- The difference between rebate and a discount.
- What are the formulas for calculating markups and markdowns?
- How to calculate functions to compute markup and markdowns.
- How to compute the markup/markdown rate of a good/service.
- Correct formula to use to calculate the product price.
- How to compute markups from cost.
- How to compute selling price from cost.

Students are able to:
- Understand the effect that discounts will have on the expenses of personal and businesses.
- Explain the various types of discounts.
- Compute the discounts for chain, trade and cash discounts.
- Calculate net selling price of chain, trade and cash discounts.
- Analyze the price and calculate the product cost with coupons, sales incentives and rebates.
● Understand the reasons a business will utilize markup and markdowns.
● Compute makeup and markdowns cost.
● Compute the markup/markdown rate of a good/service.
● Compute cost, markup or selling price when parts of the formula are provided.
● Compute markup and selling cost of products.

Students understand that:
● Discounts can effectively impact the bottom dollar of a business.
● Discounts are used by different types of companies for different purposes.
● Different formulas are used in calculating the various types of discounts.
● Computing the price of a product when a rebate is used will reduce the overall cost of the product at a later time.
● Profit can be increased with markups.
● Markdowns can increase sales and bring additional sales and revenue.
● Computing the markup/markdown rate will help determine if your prices are too high or if you are undercutting the price. This will help determine the profit of the item.
● Following the step by step procedures of calculating markup and discounts can be computed when provided marks of the formula.
● How markup and gross margin relate to each other. Retailers are dealing with selling price, but investors understand the profit margin of products.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>How can a discount impact the purchase prices for individuals? Businesses? How do you calculate purchase price with discounts?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplar High Quality Unit Task</td>
<td>Students will be able to calculate total purchase price with discounts applied. Students will be able to explain how discounts, markups, and markdowns determine the cost of an item.</td>
</tr>
</tbody>
</table>
## Map of Student Learning by Learning Objective

|----------------------------------|--------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------|----------------------------------|
| Students can explain different types of discounts and how this will affect business expenses. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | **Calculating Tax, Tip & Commission, Markup & Discount, Simple Interest (Nearpod)** | ELA: Use VoiceThread to make a podcast about the different types of discounts and how they will affect business expenses and share it. Classmates can comment on the podcast. MATH: Students will be able to calculate different types of discounts, including various discounts and markups using percentages. They will be able to calculate the sales price with discounts or markups to evaluate the impact on business expenses using tables and graphs. | **Equipment List by CTE Cluster**
 **Link to Helpful Tech Tools** |
|                                  |                                                        |                             |                                                                                 | Internet Computer
 Whiteboard/Interactive board
 Projector
 Calculator
 Handouts |
| Students can recognize the different types of discounts available to consumers. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Calculating Tax, Tip & Commission, Markup & Discount, Simple Interest (Nearpod) | Internet
Computer
Whiteboard/Interactive board
Projector
Calculator
Handouts |
|---|---|---|---|
| Students can compute different types of discounts such as: chain, trade and cash discounts. Students can determine the net price of chain, trade and cash discounts. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Price Discounts: 6 Most Common Types of Price Discounts (Economics Discussion) | MATH: Students will be able to compute chain discount, trade discount and cash discount, net price as well as discount rate by using percentages. MATH: Use a project to demonstrate how consumers can save money by taking advantage of a supplier’s trade discounts, chain discounts, and cash discounts, you save money by giving different scenarios. Ex: Your supplier, Gizmos Galore, offers a trade-discount rate of 15 percent on all widgets. Each widget | Internet
Computer
Whiteboard/Interactive board
Projector
Calculator
Handouts |
| Students can calculate the price of a product after computing the applied coupons, sales incentives and rebates. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | **Discount and Sales Price** *(Online Math Learning)*  
**Tax and Discount** *(VA Dept of Ed)* | MATH: Students will be able to compare discounts and rebates. MATH: Use a project to let students calculate and compare auto prices with coupons, sales incentives and rebates. | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |
| Students can retrieve and compute the markup and markdown cost of a good/product. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | **Markups and Markdowns Word Problems** *(Math Worksheets Land)*  
**Markup and Markdown Problems** *(Online Math Learning)* | SCI: Identify how technology is used to manage inventory and how technology has advanced. MATH: Students will be able to identify the original price as the whole and use percent and proportional relationships to solve multi-step markup and markdown problems. MATH: Use a video assignment to practice markup and markdown | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |
| Students can compute the rate at which the good/service will cost. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | Computing Unit Prices of Find the Better Buy (Tutorials Point) Unit Prices: Which is the Better Buy? (Math Games) | MATH: In a project, the students are given different pricings for some products and they will determine the best buy by calculating the unit prices. | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |
| Students can determine the cost, markup and selling pricing of the good/service to obtain the cost price. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | How to Calculate Selling Price (Indeed) How to Calculate Markup (Indeed) | MATH: Students will be able to calculate the cost, markup and selling pricing of a product. | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |
| Students can compute the markup cost from selling | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | How to Calculate Selling Price (Indeed) | MATH: Use a project to let students determine the | Internet Computer |
| price and vice versa. | blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment  
Key Vocabulary:  
discount, wholesale price, retail price, selling price, percent, trade discounts, chain discount, cash discount, special discounts, quality discounts, goods on consignment discounts, net selling price, catalog price, invoice price, complements, coupons, sales incentives, rebates, volume-based, special pricing agreements, claim-backs, complex forms, markup, markdown, markup rate, purchase price, markdown rate, cost, gross margin/gross profit margin |
| --- | --- |
| How to Calculate Markup (Indeed) | selling price based on the markup and cost of the good/service.  
Ex: A mid-sized computer accessories manufacturer just received an order for 100 headsets and 50 keyboards. Each headset costs $60 and each keyboard costs $35. The keyboards are wireless and require an extra $1000 in total to cover the additional technology. The company appoints Radha, a manufacturing manager, to determine how much to charge the order to make a 20% profit. |
| Whiteboard/Interactive board  
Projector  
Calculator  
Handouts | |
Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Use sale paper to complete a grocery shopping activity with a set budget and discounts requirements. Plan a class party using sale items purchased from a party store.

CTSO Connection:

DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event

Certification/Credential Connection:

Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)
Unit 4 Title: Data Analysis and Reporting

Content Standards

6. Analyze business data to discover trends for strategic decision-making.
   6a. Calculate mean, median, and mode in business data, and use results to measure progress toward business goals.
   
   Examples: salary, pricing
   6b. Distinguish between a simple average and a weighted average and calculate each.
   6c. Make predictions and decisions based on data and explain reasoning.
   6d. Explain how using statistics, probability, and systems of measurement impacts business decisions.
   6e. Analyze lending methods including construction loans, second mortgages, refinancing, and investment capital.

7. Display business data in tables, charts, graphs, and infographics.
   7a. Identify and construct various types of graphs and charts to interpret business data.
   7b. Compile and arrange numerical facts in an organized manner in a table, chart, or infographic to support a business presentation and/or to validate purchase decisions.
   7c. Evaluate and solve practical problems involving business and consumer applications, including business tax forms, pricing for profit, sales records, income and expenses, profit and loss, double-entry bookkeeping, debits, and credits.
   7d. Analyze journals, statements, ratio analysis, percent analysis, and inventory turnover.

Unpacked Learning Objectives

Students know:
- Applicable trends to use in strategic decision making
- Data analysis techniques for data
- Decision making processes
- The steps of calculating mean
- The steps of calculating media
- The steps of calculating mode
- Steps of calculating a simple average
- Steps of calculating a weighted average
- Steps of forecasting predictions
- Information needed to make decisions based on data
- Impact of statistics on business decisions
- Impact of probability on business decisions
- Impact of systems of measurement on business decisions
- The effects of construction loans
● The effects of second mortgages
● The effects of refinancing
● The effects of investment capital
● Uses of tables
● Uses of charts
● Uses of graphs
● Uses of infographics
● Appropriate uses of plots, graphs, pie charts, bar charts and line charts
● Uses of tables, charts or infographics to support business decision
● Uses of tables, charts or infographics to validate purchase decisions
● The impacts business tax forms, pricing for profit sales records, income and expenses, profit and loss, double-entry bookkeeping, debits and credits have on business and consumers
● Use of journals
● Application of statements in business setting
● Impact of ratio analysis and percent analysis
● Importance of inventory turnover

**Students are able to:**
● Apply knowledge of data analysis to identify strategic decision making
● Analyze business data through qualitative and quantitative analysis
● Calculate mean, median and mode
● Use calculations to then measure progress
● Calculate a simple average
● Calculate a weighted average
● Decide important business decisions given data
● Explain impact of statistics on business decisions
● Explain impact of probability on business decisions
● Explain impact of systems of measurement on business decisions
● Analyze construction loans
● Analyze second mortgages
● Analyze refinancing
● Analyze investment capital
● Determine best use of tables
● Determine best use of charts
● Determine best use of graphs
● Determine best use of infographics
● Determine when to use plots, graphs, pie charts, bar charts and line charts to best present business data.
● Use and create tables, charts and infographics
● Use such charts to support or validate certain business decisions
● Identify and explain what pricing for profit sales records, income and expenses, profit and loss, double-entry bookkeeping, debits and credits does to a business
● Distinguish and identify journals, statements, ratio analysis, percent analysis and inventory turnover in a business setting

**Students understand that:**

● Trends discovered in analyzing business data help drive strategic decision-making.
  mean, median and mode in business data can help measure progress toward business goals.
● There are differences in simple and weighted averages, and understand how to calculate each.
● Decisions should be supported by data with predictions for results of the same data.
● Statistics, probability and systems of measurement impact business decisions.
● There are differences in lending methods like construction loans, second mortgages, refinancing and investment capital tables, charts, graphs and infographics all display business data in different manners.
● Various types of graphs and charts may be used to identify and interpret business data.
● Charts, tables and infographics may play a large role in supporting business decisions or validating purchase decisions.
● Business tax forms, pricing for profit, sales records, income and expenses, profit and loss, double-entry bookkeeping, debits and credits all impact business.
● Journals, statements, ratio analysis, percent analysis and inventory turnover all impact businesses in varying manners.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>How can viewing/analyzing data help guide better decisions?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplar High Quality Unit Task</td>
<td>Students will be able to use data to help make decisions on what to sell for a school store/fundraiser.</td>
</tr>
</tbody>
</table>
### Unpacked Learning Objective SWBAT

Students can analyze business data to discover trends used in strategic decision making.

### Potential Subtasks for Assessments Formative/Summative
- Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.
- Unit project incorporating all learned skills and concepts.
- Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment

### Potential Learning Activities

<table>
<thead>
<tr>
<th>Learning Activity</th>
<th>Checklist</th>
<th>Link to Differentiation Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learning Activity</strong></td>
<td><strong>Checklist</strong></td>
<td><strong>Link to Differentiation Examples</strong></td>
</tr>
<tr>
<td><strong>4 Types of Data Analytics to Improve Decision-Making (Harvard Business School Online)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Three Examples of How Companies Make Data-Driven Decisions (Utica University)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Integrated and Related Academic Content: ELA, Math, Science, and/or Social Studies Concepts & Activities

ELA: Students will use VoiceThread to create and share short podcasts on trends used in strategic decision making. Following this creation, students will listen to the podcasts of their classmates and make comments using either the voice or text function of VoiceThread.

SCI: Create spreadsheets Excel/Google Sheets with formulas to analyze data.

MATH: Use tables and graphs to analyze business data and make predictions based on the observed trends to assist in strategic decision making.

### Equipment, Technology & Materials

- **Equipment List by CTE Cluster**
- **Link to Helpful Tech Tools**

- Internet
- Computer
- Whiteboard/Interactive board
- Projector
- Calculator
- Handouts
| Students can calculate mean, median and mode in business data to measure progress toward business goals. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | Which Measurement is More Important From a Business Perspective - Mode, Mean, or Median? (BizFluent)  
Real Life Examples of Using Mean, Median, and Mode (Statology) | MATH: Use a video assignment to review the concepts of mean, median and mode in real life scenarios using edpuzzle.com. | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |
|---|---|---|---|---|
| Students can distinguish between a simple average and a weighted average. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | Difference Between Simple Average and Weighted Average (Ask Any Difference) | MATH: Students will compare simple average and weighted average using tables by discussing the definitions, formulas as well as the use cases etc.  
MATH: Students will be able to calculate simple average and weighted average with given word problems. | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |
| Students can make predictions and decisions based on data while explaining reasoning. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Probability, Statistics, and Data Analysis Activities for Students (Villanova) | ELA: Students can use Dummy Portfolios — TeenVestor to make a free dummy stock portfolio and “trade” stocks. Students can write a paragraph | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator |
<table>
<thead>
<tr>
<th>Students can explain how statistics, probability and systems of measurement impact business decisions.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th><strong>Probability, Statistics, and Data Analysis Activities for Students (Villanova)</strong></th>
<th>MATH: Students will learn to determine if the given data is sufficient enough to make predictions with probability. For example: You've surveyed 50 customers to know if they are satisfied with your product/service. Out of them, 35 said they are happy. Based on that information alone, can you predict what’s the attitude of a random customer? Use probability for reasoning.</th>
<th>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Students can analyze lending methods such as construction loans, second mortgages, refinancing and investment capital. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | **What are Construction Loans and How Do they Work? (Bankrate)**  
**Second Mortgage: What is it and How does it Work? (Forbes)**  
**Refinance (Investopedia)** | MATH: Students will learn different lending methods, such as construction loans, second mortgages, refinancing and investment capital by solving real world problems such as calculating the cost of buying a property using these different methods in | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |
<table>
<thead>
<tr>
<th>Students can display business data in tables, charts, graphs and infographics.</th>
<th>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</th>
<th>Investment Capital (Small Business Administration)</th>
<th>order to compare the pros and cons.</th>
<th>Investment Computer Whiteboard/Interactive board Projector Calculator Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Kid’s Zone: Create a Graph (National Center for Educational Statistics) Displaying Data: How Your Students Can Display Detail (Collins)</td>
<td>MATH: Students will be able to display different business data by choosing tables, charts, graphs and infographics depending on the given scenarios and explain the advantages and disadvantages of each method.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
<td></td>
</tr>
</tbody>
</table>

| Students can identify and construct various types of graphs and charts to interpret business data. | Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | Kid’s Zone: Create a Graph (National Center for Educational Statistics) Displaying Data: How Your Students Can Display Detail (Collins) | MATH: Students will determine which types of graphs and charts to use with the given business data can help interpret the information the best in order to assist business decision making. | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |
Students can compile and arrange numerical facts to support a business presentation or to validate purchase decisions.

Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.

Unit project incorporating all learned skills and concepts.

Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment

Data Validation (CFI)

MATH: Use a project that the students are to convince the shareholders of a business about the purchase decisions they make by compiling numerical facts using various methods.

Internet
Computer
Whiteboard/Interactive board
Projector
Calculator
Handouts

Students can evaluate and solve practical business and consumer problems.

Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.

Unit project incorporating all learned skills and concepts.

Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment

Top 15 Problem-Solving Activities for Your Team to Master (Wrike)

Internet
Computer
Whiteboard/Interactive board
Projector
Calculator
Handouts

Students can analyze journals, statements, ratio analysis, percent analysis and inventory turnover.

Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.

How to Analyze Your Business Using Financial Ratios (Edward Lowe Foundation)

MATH: Students will be able to analyze data by using ratios and percentages to make business decisions.

Internet
Computer
Whiteboard/Interactive board
Projector
Calculator
Unit project incorporating all learned skills and concepts.

Formative: Observations of student progress - classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment

**How to Calculate Inventory Turnover (Investopedia)**

**Key Vocabulary**

data-driven decision making, qualitative analysis, data analysis, measures of central tendency, mean, medium, mode, data, data set, basis of comparison, average, weighted average, forecast, networking, return on investment, synergy, sustainability, logistics, quota, cash flow, capital, probability, volume, regression, real time analytics, trends, interest, APR, loan amortization, fixed interest, collateral, lein, income statement, net worth statement, construction loans, second mortgages, refinancing, investment capital, tables, charts, graphs, infographics, plot, graph, pie chart, bar chart, line chart, Form 1120, eCommerce, sales records, income, profit, profit and loss, debits, credits, double-entry bookkeeping, journals, statements, ratio analysis, percent analysis, inventory turnover, profitability, liquidity, operational efficiency, solvency, cost of goods sold, average value of inventory, opportunity cost

**Work-Based Learning, Simulated Work Experiences, and Experiential Learning:**

Plan a fundraiser for a CTSO using data from a previous year

**CTSO Connection:**


DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event
### Certification/Credential Connection:

<table>
<thead>
<tr>
<th>Certification/Credential Connection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)</td>
</tr>
</tbody>
</table>
Unit 5 Title: Payroll

Content Standards
8. Create an individual payroll and earnings record for a salaried and an hourly worker.
   8a. Calculate pay based on piecework, salary, commissions, and graduated commissions.
   8b. Calculate gross pay based on an hourly wage with an overtime policy.
   8c. Calculate an employee’s net earnings per pay period using varied amounts for health insurance, FICA, and tax deductions.
   8d. Explain the costs and benefits of payroll-deducted flexible benefit packages.
       Examples: IRA, 401(k), flexible spending plans

9. Describe and calculate federal and state taxes associated with employee payroll.
   9a. Find the federal tax withholding amount per paycheck for an individual, using IRS tax tables and IRS percentage method.
   9b. Calculate an employee’s Social Security tax and Medicare tax per paycheck.
   9c. Determine an employer’s total deposit for withheld income tax, Social Security tax, and Medicare tax per pay period and quarterly for a group of employees.
   9d. Compute business expenses related to employees.

Unpacked Learning Objectives
Students know:
- Difference in salaried and hourly workers
- Steps and components of payrolls and earning records
- Compute pay based on percent commissions.
- Compute piecework salary.
- That gross pay based on hourly wage is calculated by multiplying wage by hours.
- Applicable laws and regulations on overtime pay.
- How overtime pay differs from regular hourly wages.
- What deductions are pre-tax and what deductions are post-tax.
- What can be deducted from paychecks.
- The benefits of payroll-deducted flexible benefit packages.
- The costs of payroll-deducted flexible benefit packages.
- What payroll-deducted benefit packages are.
- All applicable federal taxes associated with payroll.
- All applicable state taxes associated with payroll.
- That the IRS has varying tax tables and percentages by income.
- That taxable income depends on the total amount earned.
● What Social Security taxes are.
● What Medicare taxes are.
● How Social Security and Medicare taxes affect paychecks.
● That income tax, Social Security and Medicare taxes are withheld.
● Employees carry additional business expenses beyond salary.

Students are able to:
● Compute payrolls based on salary figures and/or hourly wages
● Compute pay based on commission,
● Compute piecework pay.
● Compare types of pay to identify advantages and disadvantages of pay based on production.
● Calculate the value of certain employee benefits, compute paycheck deductions
● Calculate gross pay given hourly wages and hours worked.
● Determine overtime wages given overtime policies.
● Calculate gross pay combining hourly wages and overtime pay.
● Deduct money from gross pay based on various benefits or taxes to compute net pay.
● Analyze payroll-deducted flexible benefits.
● Analyze various costs and benefits of each benefit.
● Deduct federal taxes from payroll.
● Deduct state taxes associated with payroll.
● Determine total federal tax withholding using such tables and percentages from the IRS.
● Calculate Social Security tax rates.
● Calculate Medicare tax rates.
● Calculate payroll withholdings for one single employee.
● Calculate payroll withholdings for a group of employees.
● Determine business expenses related to employees.

Students understand that:
● Salary and earnings vary on type of income, being salaried and hourly.
● The advantages and disadvantages of a pay-based population.
● Gross pay refers to the amount used to calculate the wages of an employee (hourly) or salary (for the salaried employee).
● Various taxes and benefits may be deducted from a paycheck, making net pay lower than gross pay.
● Payroll-deducted flexible benefit packages have a wide array of costs and benefits.
● State and federal taxes are deducted from employee payrolls, impacting wages.
● Federal tax withholdings vary by income earned.
● Paychecks have Social Security and Medicare taxes.
● Income tax, Social Security and Medicare taxes are withheld each pay period.
● Each employee brings an additional business expense.
### Unit Driving/Essential Question

What deductions are mandatory for payroll?  
How is net pay determined?

### Exemplar High Quality Unit Task

Students will be able to calculate payroll for various types of employees.  
Students will be able to calculate the amount of taxes to deduct from an employee’s earnings.

---

### Map of Student Learning by Learning Objective

|----------------------------------|--------------------------------------------------------|-----------------------------|-----------------------------------------------------------------|----------------------------------|
| Students can create an individual payroll and earnings record for both salaried and hourly workers. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class |  
Calculating the Numbers in Your Paycheck (CFPB)  
10 Steps for Doing Payroll Manually (The Blueprint) | MATH: Students will be able to calculate payroll and earnings for both salaried and hourly workers with different rates.  
SCI: Create spreadsheet formulas to solve mathematical problems and analyze data. | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |

---

Examples of Learning Activity Checklist and Link to Differentiation Examples:

- **Learning Activity Checklist**
- **Link to Differentiation Examples**

---

---
<table>
<thead>
<tr>
<th>Students can calculate pay based salaries, commissions and graduated commissions.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
</tr>
<tr>
<td>Students can calculate gross pay based on an hourly wage with an overtime policy.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
</tr>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
</tr>
</tbody>
</table>

**Commissions and Graduated Commissions** *(Math Worksheets Land)*

**Hourly and Overtime Pay** *(Math Worksheets Land)*
**Gross Pay with Overtime** *(iNet Teacher)*

**MATH:** Use a project that requires students to compare different job offers by calculating salaries, commissions and graduated commissions.

**MATH:** Students will be able to solve word problems about gross pay based on an hourly wage with overtime.

**Internet, Computer, Whiteboard/Interactive board, Projector, Calculator, Handouts**
<table>
<thead>
<tr>
<th>Students can calculate net earnings after making deductions based on health insurance, FICA, tax deductions and others.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th>Bring Home the Gold (Council for Economic Education) Social Security and Medicare Taxes (Math Worksheets Land)</th>
<th>MATH: Divide students into groups to work on net earnings after various deductions, including health insurance, FICA, taxes and etc. given different scenarios.</th>
<th>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students can explain the costs and benefits of payroll-deducted flexible benefit packages.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>The Pros and Cons of Flexible Benefits (Business.com) Flexible Benefits in the Workplace (BLS)</td>
<td>ELA: Create an infographic using Canva to explain the costs and benefits of payroll-deducted flexible benefit packages.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students can describe and calculate federal and state taxes associated with employee payroll.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Bring Home the Gold (Council for Economic Education)</td>
<td>MATH: Students will be able to compute federal and state taxes with the given employee payroll in the word problems.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator</td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
<td>Tools/Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students can find the federal tax withholding among per paycheck using IRS tax tables and IRS percentage method.</td>
<td>Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment. Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Handouts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students can calculate an employee’s Social Security and Medicare tax.</td>
<td>Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment. Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MATH**: Students will be able to locate federal tax withholding among per paycheck by using IRS tax tables and IRS percentage method. MATH: Use the [online IRS tax withholding estimator](https://www.irs.gov/pub/irs-pdf/iw4.pdf) to help understand how to complete Form W-4.

**MATH**: Students will be able to calculate employee’s social security and medicare tax using percentages.
<table>
<thead>
<tr>
<th>Students can determine an employer's total deposit for withheld income tax, Social Security tax and Medicare tax per pay period and quarterly for a group of employees.</th>
<th>discussions, quizzes, enter &amp; exit slips, self-assessment</th>
<th>How to Calculate Payroll Step-by-Step (OnPay) Payroll Formula (Wallstreet Mojo)</th>
<th>MATH: Enter given data and calculate total deposit for withheld income tax, social security tax and medicare tax per pay period and quarterly in an Excel or google sheets.</th>
<th>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>18 Common Business Expenses (Indeed) Business Expense Deductions for Employee Related Costs (The Balance Small Business)</td>
<td>MATH: Students will be able to solve word problems about computing business expenses related to employees.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
<td></td>
</tr>
</tbody>
</table>
## Key Vocabulary

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>gross earning</td>
<td>include all earnings, including bonuses and tips, before any deductions.</td>
</tr>
<tr>
<td>commission</td>
<td>earnings paid to salespeople for each item sold, based on a percentage.</td>
</tr>
<tr>
<td>deductions</td>
<td>amounts taken from earnings to pay for taxes, insurance, and other expenses.</td>
</tr>
<tr>
<td>gross pay</td>
<td>total earnings before any deductions.</td>
</tr>
<tr>
<td>hourly wages</td>
<td>earnings paid per hour worked.</td>
</tr>
<tr>
<td>overtime rate</td>
<td>rate paid for hours worked beyond the standard workweek hours.</td>
</tr>
<tr>
<td>benefits</td>
<td>compensation provided in addition to wages, such as health insurance.</td>
</tr>
<tr>
<td>taxes</td>
<td>amounts withheld from earnings to pay for taxes.</td>
</tr>
<tr>
<td>pension</td>
<td>retirement savings plans provided by employers.</td>
</tr>
<tr>
<td>health insurance</td>
<td>insurance coverage for medical expenses.</td>
</tr>
<tr>
<td>FICA</td>
<td>Federal Insurance Contributions Act, includes Social Security and Medicare.</td>
</tr>
<tr>
<td>Social Security Taxes</td>
<td>payments made by employers to fund Social Security and Medicare.</td>
</tr>
<tr>
<td>Medicare Taxes</td>
<td>payments made by employers to fund Medicare.</td>
</tr>
<tr>
<td>state taxes</td>
<td>payments made by employers to fund state-specific insurance programs.</td>
</tr>
<tr>
<td>federal taxes</td>
<td>payments made by employers to fund federal insurance programs.</td>
</tr>
<tr>
<td>local taxes</td>
<td>payments made by employers to fund city-specific insurance programs.</td>
</tr>
<tr>
<td>payroll-deducted flexible benefit</td>
<td>amounts deducted from earnings to pay for benefits.</td>
</tr>
<tr>
<td>cafeteria plans</td>
<td>meal and parking facilities provided by employers.</td>
</tr>
<tr>
<td>income tax</td>
<td>amount of money earned from work.</td>
</tr>
<tr>
<td>withholding allowances</td>
<td>amounts withheld from earnings to pay for taxes.</td>
</tr>
<tr>
<td>W4</td>
<td>Form used to report wages and withholding allowances.</td>
</tr>
<tr>
<td>IRS</td>
<td>Internal Revenue Service, responsible for federal tax collection.</td>
</tr>
<tr>
<td>Earned Income Credit</td>
<td>credit available to low-income individuals to reduce tax liability.</td>
</tr>
<tr>
<td>1040</td>
<td>tax form used to file annual income tax return.</td>
</tr>
<tr>
<td>tax brackets</td>
<td>categories used to calculate tax liability.</td>
</tr>
<tr>
<td>tax rates</td>
<td>rates used to calculate tax liability.</td>
</tr>
<tr>
<td>withholding</td>
<td>amounts withheld from earnings to pay for taxes.</td>
</tr>
<tr>
<td>Medicare</td>
<td>health insurance program for individuals aged 65 and older.</td>
</tr>
<tr>
<td>Social Security</td>
<td>retirement program for employed individuals.</td>
</tr>
<tr>
<td>Net Income/wages</td>
<td>amount of money earned from work after all deductions.</td>
</tr>
<tr>
<td>regressive tax</td>
<td>tax that is proportional to income and increases as income increases.</td>
</tr>
<tr>
<td>Pay Period</td>
<td>time period in which pay is received.</td>
</tr>
<tr>
<td>Form 2106</td>
<td>tax form used to report wages and taxes paid to subcontractors.</td>
</tr>
<tr>
<td>Tax Cuts and Jobs Act</td>
<td>tax relief measures implemented through legislation.</td>
</tr>
</tbody>
</table>

## Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

- Create a payroll for class based on class assignments;
- Create a payroll for a student-led store/bank;
- Guest speakers

## CTSO Connection:


**DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event**

## Certification/Credential Connection:

- Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)
Unit 6 Title: Interest Rates

Content Standards
10. Examine rates, amount of interest, and proceeds of bank discounts for various loans and explain how variations in these factors impact financial outcomes and decisions.
   10a. Calculate simple interest using the simple interest formula for a personal and a business loan based on various credit scores.
   10b. Calculate any single variable (principal, interest rate, amount of interest, or time) given the other three to evaluate optimal conditions for pursuing a bank loan.
   10c. Explain the process of discounting a promissory note and calculate the proceeds of a discounted promissory note.

11. Explain maturity value and find the maturity value of a loan.
   11a. Compute compound interest on a loan by compounding annually.
   11b. Create an amortization table in spreadsheet software showing interest compounded daily using varying rates and terms.

Unpacked Learning Objectives

Students know:
- That rate and amount of interest cause variation in financial outcomes.
- That simple interest rates use formulas.
- How to calculate principal with other three variables
- How to calculate interest rate given other three variables
- How to calculate amount of interest given other three variables
- How to calculate time given the other three variables
- The process of discounting a promissory note.
- The steps of calculating the proceeds from a discounted promissory note.
- The concept of maturity value
- The steps of finding maturity value of a loan
- The steps of finding compound interest
- The steps for compounding annually
- The steps of creating an amortization table
- Steps of compounding interest daily
- Impact of varying rates and terms

Students are able to:
- Determine the variation in financial outcome based on interest rates, amount of interest and proceeds of bank discounts.
- Identify how credit score impacts interest rates for loans.
● Calculate simple interest rates.
● Calculate one single variable given the other three.
● Determine optimal conditions for pursuing a bank loan.
● Apply discounts to given promissory notes.
● Calculate proceeds of discounted promissory note.
● Explain maturity value.
● Calculate maturity value of a loan.
● Calculate compound interest.
● Compound interest at an annual rate.
● Calculate daily compounded interest.
● Create amortization tables.
● Identify impacts of varying interest rates and terms.

Students understand that:
● Interest rates cause variation in financial outcomes and decisions.
● Simple interest rates for personal and business loans vary by credit score.
● The variables of principal, interest rate, amount of interest and time are used to calculate optimal conditions for pursuing a bank loan.
● Promissory notes have steps to discounting and obtaining profits.
● Maturity values impact loans and the value of such.
● Interest is calculated and compounded at different rates.
● Amortization tables can show changes in value of interest with different rates and terms.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>How do rates, amount of interest, and proceeds of bank discounts impact financial outcomes and decisions? How is the maturity value of a loan determined?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplar High Quality Unit Task</td>
<td>Students will be able to calculate interest rates for a purchase. Students will be able to determine the maturity value of a loan.</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Students can examine interest rates and proceeds of bank discounts for loans, explaining how variation affects financial outcomes and decisions.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
</tr>
<tr>
<td>Students can calculate simple interest for personal and business loans based on differing credit scores.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
</tr>
</tbody>
</table>

Alabama State Department of Education, Career and Technical Education/Workforce Development, Plans of Instruction Updated as of Jan 8, 2022
<table>
<thead>
<tr>
<th>Students can calculate any single variable given the other three to evaluate optimal conditions for pursuing a bank loan.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th>Unit project incorporating all learned skills and concepts.</th>
<th>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>What Banks Look for When Reviewing a Loan Application (Wolters Kluwer)</td>
<td>What Factors are Taken Into Account to Quantify Credit Risk? (Investopedia)</td>
<td>MATH: Use a project to help students understand optimal conditions when pursuing a bank loan by calculating different factors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can explain the process of discounting a promissory note and calculate the process of a discounted promissory note.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
</tr>
<tr>
<td></td>
<td>Application - Promissory Note (Mathematics LibreTexts)</td>
<td>How to Calculate a Discount on a Promissory Note (Bizfluent)</td>
<td>ELA: Students can use the Think-Pair-Share strategy to explain the process.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MATH: Students will be able to calculate the interest, proceeds and true rate of interest of a discounted promissory note.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can explain maturity value and find such value of a loan.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Maturity Value Definition (Accounting Tools) Maturity Value Calculator (Calculator Academy)</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Students can compute compound interest on a loan by compounding annually.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Compound Interest (Investopedia) Compound Interest: Learn How to Calculate Compound Interest (ENT Credit Union)</td>
</tr>
</tbody>
</table>
Students can create an amortization table in spreadsheet software to show interest compounded daily using varying rates and terms.

| Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. |
| Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. |
| Unit project incorporating all learned skills and concepts. |
| Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment |

How to Make a Loan Amortization Schedule in Excel (Abelbits)

Loan Amortization Schedule Schedule: How to Calculate Accurate Payments (Fundera)

SCI: Students will create an amortization table using spreadsheet formulas for daily compounded interest rates using varying rates and terms.

MATH: Create an amortization table to show interest compounded daily by using various rates and terms. Compare the result with interest compounded annually.

Internet
Computer
Whiteboard/Interactive board
Projector
Calculator
Handouts

Key Vocabulary

interest rates, simple interest, present value, discounts and proceeds, credit score, principal, loans, promissory note, agreement, contract, default, maturity date, term of the note, maturity value, compounding, compound interest, amortization table, market rate, cash received, interest revenue, annual interest rate

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Guest speaker from local bank

CTSO Connection:

DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event

Alabama State Department of Education, Career and Technical Education/Workforce Development, Plans of Instruction
Updated as of Jan 8, 2022
## Certification/Credential Connection:

<table>
<thead>
<tr>
<th>Certification/Credential Connection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)</td>
</tr>
</tbody>
</table>

Alabama State Department of Education, Career and Technical Education/Workforce Development, Plans of Instruction Updated as of Jan 8, 2022
Unit 7 Title: Investments

Content Standards
12. Explain investment terms including risk, yields, price to earnings (P/E) ratio, and rate of return.
   12a. Explain the effects of compounding in an investment and lending environment.
   12b. Compare investment opportunities and make mathematical comparisons of investment alternatives.
   12c. Explain net present value and describe how to calculate the net present value of an investment.
   12d. Determine stock yield, earnings per share, and price to earnings ratio for several stocks.
   12e. Calculate the anticipated rate of return on specific investments (ROI) and savings accounts using various factors including simple or compound interest, dividends, and fees.
   12f. Calculate a stock’s percentage price change over a period of several weeks.
   12g. Calculate a stock’s dollar price change over a period of several weeks.
   12h. Complete a stock transaction form for buying and selling stocks.
   12i. Describe how common stocks are valued.

Unpacked Learning Objectives

Students know:
● How to use these terms to determine a stock’s performance and the associated risk of investing in it for long/short term.
● How powerful compound interest is in a long term situation and how it can affect a portfolio based on periodic investments.
● What net present value is and why it is useful.
● What a positive/negative net present value means.
● What a stock yield, earnings per share, and price to earnings ratio is for stocks.
● What a P/E ratio is for a stock that is bankrupt or not paying earnings.
● How rate of return, interest, and dividends are used in investment decision making.
● What it means if the percentage is positive or negative.
● How time is a factor in the calculated change.
● The context of the overall change of the stock. Ex. $1 decrease= no big deal, or loss of company
● What information is given for stock performance and which is most important.
● The proper form to use when preparing a tax return
● Collect proper tax documents to complete tax return
● Select correct tax schedules to complete for tax return
● Various methods for filing a tax return

Students are able to:
● Identify a stock’s rate of return and P/E Ratio.
- Identify high/low risk investments and know the trade-offs of investing in each.
- Explain which is more powerful in compound interest: time or amount invested and why.
- Explain how lenders use compound interest.
- Calculate net present value of an investment and explain what it means for it to be positive or negative.
- Calculate yield, earnings per share, and price to earnings ratio for current stocks.
- Calculate the rate of return on a few different example investments and determine which is the better investment.
- Calculate the stock’s percentage price change given two closing prices.
- Calculate the stock’s dollar price change given two closing prices.
- Complete a stock transaction form
- Identify which stocks are perceived as having high value.

Students understand that:
- Determining which investments to invest in is largely based on the performance of the stock and how risky the investment is.
- One of the most powerful tools in investing is the advantage of compound interest and the effect time has on it.
- There are always opportunity costs in investing and there are many factors associated in making a decision in which to invest in.
- The value of an investment depends on the cash inflow/outflow of the investment. Past and future values are very beneficial to understand.
- The yield and price to earnings ratio are very helpful in evaluation of an investment.
- Most investments are evaluated on their overall rate of return and how long it takes to achieve this rate of return.
- Most stock performances are based on a percentage price between days.
- Dollar prices of a stock might not give the full picture of the stock performance.
- There are multiple ways to determine the value of a stock, but price to earnings ratio is a quick standard.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>What type of risks are associated with investments?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How is the rate of return on investments determined?</td>
</tr>
</tbody>
</table>

| Exemplar High Quality Unit Task | Students will be able to distinguish between good and bad investments by determining risks, yields, price to earning ratio, and rate of return. |
## Map of Student Learning by Learning Objective

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SWBAT</td>
<td>Formative/Summative</td>
<td>Learning Activity Checklist</td>
<td>Link to Differentiation Examples</td>
<td>Equipment List by CTE Cluster</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Link to Helpful Tech Tools</td>
</tr>
<tr>
<td>Students can identify high/low risk investments based on the history of the stock. Students can determine how yield, P/E ratio and rate of return are used to determine a stock’s performance.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Marketplace: Investing Basics (Everfi) What is a Stock? (NGPF)</td>
<td>MATH: Create tables and graphs to make predictions of a stock’s future performance by using yield, P/E ratio and rate of return.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can identify when interest is compounded on an investment or loan vs. interest that is not compounded long term.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Why Should I Invest? (NGPF)</td>
<td>MATH: Use a project that requires students to calculate interest on an investment or loan with and without being compounded and compare the difference quantitatively.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can identify pros/cons of two different investment opportunities.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td><strong>What's your Investment Strategy? (NGPF)</strong></td>
<td>ELA: Students can create a T-chart of pros and cons for investment opportunities. SCI: Students will utilize the Scientific Method to determine good investment opportunities. <em>The science behind stock market trading.</em></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Unit project incorporating all learned skills and concepts.</strong></td>
<td><strong>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</strong></td>
<td><strong>Buy and Hold: A Stock Market Simulation (EconEdLink)</strong></td>
<td><strong>MATH: Students will be able to solve word problems about calculating the net present value of an investment. (video example)</strong></td>
<td></td>
</tr>
<tr>
<td>Students can calculate the net present value of an investment and explain how it can help when comparing investments.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td><strong>Internet</strong> <strong>Computer</strong> <strong>Whiteboard/Interactive board</strong> <strong>Projector</strong> <strong>Calculator</strong> <strong>Handouts</strong></td>
<td><strong>Internet</strong> <strong>Computer</strong> <strong>Whiteboard/Interactive board</strong> <strong>Projector</strong> <strong>Calculator</strong> <strong>Handouts</strong></td>
<td></td>
</tr>
<tr>
<td>Students can compute yield and price to earnings ratios based on a theoretical stock.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Prices to Earning Ratios (Teachnology)</td>
<td>SCI: Students can create spreadsheet formulas to determine yield and price to earnings ratios. MATH: Project: Students will research a stock by computing its yield and price to earnings ratios to predict the trends of the future growth.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Students can compute the rate of return on an investment (both simple and compound interest)</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Buy and Hold: A Stock Market Simulation (EconEdLink)</td>
<td>SCI: Students can create spreadsheet formulas to determine the rate of return on an investment (simple and compound interest. MATH: Writing prompts: Students are to convince someone that investing is a valuable strategy to help them meet their financial goals by computing the rate of return on an investment.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can calculate a stock’s percentage price change.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Playing an Investment Game (CFPB)</td>
<td>MATH: Reflect on the risks and rewards of stock investing by calculating its percentage price change.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Students can calculate a stock’s dollar price change.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Playing an Investment Game (CFPB)</td>
<td>MATH: Calculate a stock’s market price change in word problems.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can complete a stock transaction form.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Stock Market Game</td>
<td></td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator</td>
</tr>
</tbody>
</table>

Alabama State Department of Education, Career and Technical Education/Workforce Development, Plans of Instruction Updated as of Jan 8, 2022
| Students can evaluate multiple stocks and determine which are valued the highest/lowest |
|---|---|---|---|
| Unit project incorporating all learned skills and concepts. Formative: Observations of student progress- classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment. | Buy and Hold: A Stock Market Simulation (EconEdLink) | MATH: Use tables and graphs to compare common stocks and rank them from the highest to the lowest value. |
| | | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |

**Key Vocabulary**

risk, yield, Earnings Per Share (EPS), price to earnings ratio (forward/ trailing), rate of return, compound interest, opportunity cost, historical performance, net present value, cash inflow/outflow, stock yield, earnings per share, rate of return, simple interest, compound interest, dividends, closing price
## Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Complete the Stock Market Game; Track stocks; Guest speakers from local investment firms

## CTSO Connection:

| DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event |

## Certification/Credential Connection:

| Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate) |
Unit 8 Title: Personal Taxes

Content Standards
13. Describe and prepare federal tax documents for varying household types.
   13b. Determine the need for and prepare a 1040A using the required documentation for varying households.
   13c. Complete basic tax forms for business and personal use utilizing strategies to maximize benefits and determine the results of the selected strategies.

14. Discuss and calculate property taxes based on local percentages and guidelines including assessed values and homestead exemptions.

Unpacked Learning Objectives

Students know:
- The difference between gross pay and net pay.
- Employers know how much payroll and income taxes to withhold from their pay based on information they entered on W-4 form.
- Understand that wages and tip income are taxable.
- That wages, salaries, bonuses, commissions, and tips are taxable.
- Employers report these types of income on Form W-2, Wage and Tax Statement (ALL tip income is taxable, even if it is not reported on Form W-2).
- Employees use Form W-2 to complete their individual income tax returns.

Students are able to:
- Identify the types and uses of payroll taxes.
- Explain how federal income taxes are used.
- Distinguish between gross and net pay.
- Describe how employers withhold and remit taxes.
- Explain the purpose of Form W-4.
- Analyze a W-2.

Students understand that:
- Employers use Form W-4 to determine the amount of income tax to withhold.
- Employers send withheld taxes to the federal government.
- Employees will receive a W-2 reporting income earned that is used in tax preparation.
### Unit Driving/Essential Question
What documents are needed for federal tax forms?  
Who is required to fill out federal income tax forms?  
How are property taxes calculated?

### Exemplar High Quality Unit Task
Students will be able to complete a simple tax return.  
Students will be able to calculate property tax.

---

**Map of Student Learning by Learning Objective**

|----------------------------------|--------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------|
| Students will be able to determine which tax form to use when completing a tax return. (1040, 1040-ES helps calculate estimated quarterly taxes for self-employed, 1040-NR - Nonresident aliens form, 1040-SR - people 65 and older). Note: 1040A and 1040EZ are no longer used. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter | **Learning Activity Checklist**  
**Link to Differentiation Examples** | **How to File Your Taxes (NGPF)**  
**Completing the 1040 (NGPF)** | **Equipment List by CTE Cluster**  
**Link to Helpful Tech Tools** | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |
<table>
<thead>
<tr>
<th>Students will</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th>ELA: Public Speaking: Students will present an expository speech on the withholding of payroll and income taxes from pay or on how wage and tip income is reported.</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Understand the withholding of payroll and income taxes from pay.</td>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>How to File Your Taxes (NGPF)</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>● Complete tax forms W-4</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Completing the 1040 (NGPF)</td>
<td></td>
</tr>
<tr>
<td>● Explain that income from wages and tips is taxable.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Describe how wage and tip income is reported to employees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Analyze a W-2 form</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key Vocabulary**

1040, 1040-ES, 1040-NR, 1040-SR, income, wages, tip income, interest income, 1099, dependents, filing status, exemptions, standard deductions, tax credits, child tax credit, dependent care expenses, education credits, earned income credit, refund, amount due, record keeping, electronic tax return, payroll taxes, federal income tax, Federal Insurance Contribution Act (FICA) Tax, Form W-4, Employee’s Withholding allowance Certificate, Medicare tax, Social Security tax, gross pay, net pay, bonus, commission, salary
Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

| Guest Speaker from local tax company, Complete tax returns for working students |

CTSO Connection:

| DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event |

Certification/Credential Connection:

| Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate) |
Unit 9 Title: Bank Records

Content Standards
15. Outline the historical progression of banking institutions and how changes affected customers’ costs for services.

16. Complete routine banking procedures to manage finances efficiently.
   16a. Utilize business and personal data to write checks, prepare deposits, and prepare withdrawal slips without going over budget or incurring penalty fees.
   16b. Utilize methods for maintaining a check register including proper procedures for ATM usage (without incurring usage fees) and automatic payment withdrawals.
   16c. Reconcile bank statements.
   16d. Explain fees associated with banking accounts.

17. Describe features, advantages, and disadvantages of mobile and online banking.

Unpacked Learning Objectives

Students know:
- The difference between personal accounts and corporate accounts.
- Government branches and financial divisions.
- What are common banking services?
- What are the differences among banks?
- How computers and banking components work together.
- Types of Investment Instruments and investment goals.
- Key terminology and procedures for completing the following steps: write a check, make a deposit, balance a checkbook, reconcile a checkbook.
- What is an ATM?
- What are fees associated with ATMs?
- How to go over their deposits and withdrawals.
- How to adjust the bank statement for transactions.
- How to access current and previous months statements.
- The difference between the cash or check book and bank statement balances.
- How to read a bank statement.
- How they receive their bank statement.
- The name of their bank/company.
- Fees associated with bank accounts.
● The In-person banking process and procedure.

**Students are able to:**
- Follow the trajectory of the demand for banking through historical events.
- Connect the steps from one earning a paycheck to spending the paycheck.
- Write checks and keep a running balance in a checkbook.
- Describe how to deposit a check.
- Explain how to use an ATM card.
- Explain how to use a debit card.
- Read and interpret a checking account statement.
- Complete a variety of banking functionality and forms.
- Balance a check register.
- Determine how fees are assessed when utilizing an ATM.
- Reconcile bank statement and summarizes banking and business activity.
- Construct a bank reconciliation statement using the adjusted cash book balance.
- How to read and balance a checking account statement.
- Identify behaviors that could accrue fees.
- Calculate fees based on different actions (ex: withdrawing money from an ATM).
- Identify the differences between in-person banking and online banking.
- Analyze personal accounts online or on an app.
- Make a mobile deposit.
- Transfer money from one account to another.

**Students understand that:**
- Modern banking has a fluid foundation that changes based on national and international events.
- Their different types of banking services, functions and purposes a bank can provide.
- Banking functions are how to maintain a bank account efficiently.
- Using an ATM can be convenient, but you must provide documentation in your check register of all transactions including ATM transactions.
- Utilizing some ATMs will incur withdrawal fees.
- When you reconcile your bank statements it ensures payments have been processed and cash collections have been deposited into the bank.
- Checking account statements include deposits and payments made during the month, along with beginning and ending account balances.
- Every month, you need to balance or check that your checkbook matches the balances of the checking account statement.
- A personal bank account can involve fees and some are avoidable depending on banking and spending behaviors.
- While there are differences between in person banking and online/mobile banking, the convenience of banking is up to the individual customer.
| Unit Driving/Essential Question | How has the banking industry changed over the last two centuries?  
Why is it important to maintain a check register and reconcile bank statements?  
What are pros and cons of mobile and online banking? |
|---------------------------------|------------------------------------------------------------------------------------------------------|
| Exemplar High Quality Unit Task | Students will be able to perform various banking activities.  
Students will be able to describe pros and cons of mobile and online banking. |

**Map of Student Learning by Learning Objective**

|----------------------------------|--------------------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------|---------------------------------|
| Students can understand the creation and evolution of modern banking. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter | Money Moves Modern Banking and Identity Protection (Everfi) | ELA: Students can use [www.sutori.com](http://www.sutori.com) to create timelines of the evolution of modern banking. | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |

**Equipment List by CTE Cluster**

- **Equipment List by CTE Cluster**

**Link to Helpful Tech Tools**

- **Equipment List by CTE Cluster**
<table>
<thead>
<tr>
<th>Students can demonstrate the knowledge of maintaining a checking and savings account.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th>Money Moves Modern Banking and Identity Protection (Everfi)</th>
<th>ELA: Students will create a checkbook register where they will categorize their expenditures and write summary statements about their expenses.</th>
<th>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Students can demonstrate their skills at completing the following:  
● Write a check  
● Make a deposit  
● Balancing a checkbook  
● Reconciling your checkbook register | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Banking Services (Practical Money Skills) | ELA: Using Make a Public Service Announcement | PSA Template, students can make a public service announcement discussing the importance of reconciling a checkbook register. | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td>MATH: Project: Students will record normal household expenses within a month period and learn to balance a checkbook as well as reconcile checkbook register.</td>
<td></td>
</tr>
<tr>
<td>Students can demonstrate their skills to reconcile a check register.</td>
<td>SCI: Analyze expenses by tax deductible or non-tax deductible expenses.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students can explain how to use an ATM machine and when/how to avoid withdrawal fees.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Beware of Banking Fees (NGPF)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Calculate: Reconcile Your Checkbook (NGPF)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Banking Services (Practical Money Skills)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students can demonstrate bank reconciling steps by step procedures.</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit project incorporating all learned skills and concepts.</td>
</tr>
<tr>
<td></td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
</tr>
<tr>
<td></td>
<td>Calculate: Reconcile Your Checkbook (NGPF)</td>
</tr>
<tr>
<td></td>
<td>Banking Services (Practical Money Skills)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELA: Using Screencastify, students can make a video explaining how to use an ATM machine and how to avoid withdrawal fees.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA: Students will do a demonstration speech on bank reconciling step-by-step procedures.</td>
</tr>
</tbody>
</table>

Internet Computer
Whiteboard/Interactive board
Projector
Calculator
Handouts
<table>
<thead>
<tr>
<th>Activity</th>
<th>Assessment</th>
<th>Materials</th>
<th>Internet</th>
<th>Computer</th>
<th>Whiteboard/Interactive board</th>
<th>Projector</th>
<th>Calculator</th>
<th>Handouts</th>
</tr>
</thead>
</table>
| Students will demonstrate the knowledge of the concept of reconciling bank statements. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | Calculate: Reconcile Your Checkbook (NGPF)  
Banking Services (Practical Money Skills) | Internet | Computer | Whiteboard/Interactive board | Projector | Calculator | Handouts |
| Students can identify different costs associated with a personal bank account and their purpose. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | How Banking Works (NGPF) | ELA: Students will present the different costs associated with a personal bank account and their purposes in Google Slides along with a Works Cited slide using correct formatting of citations. | Internet | Computer | Whiteboard/Interactive board | Projector | Calculator | Handouts |
| Students can critically understand if online banking is beneficial for customers. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Online Banking (NGPF) | ELA: Writing and Public Speaking: Students will write scripts for a commercial advertising online banking and its benefits. Using | Internet | Computer | Whiteboard/Interactive board | Projector | Calculator | Handouts |
Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment

| Screencastify, students will record the commercial and present the video to the class. ELA: Students will peer edit the scripts for the commercials. | Handouts |

**Key Vocabulary**
- federal reserve, money supply, fractional reserve banking system, inflation, interest rates, discount rate, market, bank, check, deposit, balance, check register, reconcile, withdrawals, collateral, savings, types of loans, direct deposits, ATM, savings account, CD, budget, overdraft fees, bank statement, outstanding checks, ending balance, statement period, starting balance, transactions, adjusted balance, statement balance, payments, credits, debits, outstanding deposits, overdraft, monthly service, non-sufficient fund, paper statement, foreign transaction, closure, online deposit, automated bill payments, mobile transfer, overhead fees, two step authentication, mobile app

**Work-Based Learning, Simulated Work Experiences, and Experiential Learning:**
- Guest Speaker from local bank, Field trip to Federal Reserve Bank, Virtual field trip

**CTSO Connection:**
- DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event
Certification/Credential Connection:

<table>
<thead>
<tr>
<th>Certification/Credential Connection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)</td>
</tr>
</tbody>
</table>
Unit 10 Title: Insurance

Content Standards
18. Identify and compare types of insurance and compute the costs and benefits of selected plans.
   18a. Explain insurance premium charts, determine the cost of a particular policy, and explain the reasons for selecting one policy over the others.
   18b. Evaluate proposals for automobile insurance and determine costs of both compulsory and optional coverage.
   18c. Review health insurance coverage plans, calculate premiums based on selected options, and discuss the rationale (mathematical or personal) for selecting a particular option.
   18d. Assess the effects of deductibles on policy costs and the ramifications of selecting a higher or lower deductible.

Unpacked Learning Objectives

Students know:
- The different types of insurance.
- How to compare and compute the same or similar types of insurance.
- How to select an insurance policy that best benefits them and their family.
- How to analyze an insurance premium chart.
- How to decipher between multiple policies and determine policy will be most beneficial.
- How to evaluate and calculate factors determining the cost of compulsory and optional coverage.
- How to review and calculate health insurance premiums.
- The difference between different insurance policies.
- When to select a higher deductible and when to select a lower deductible.

Students are able to:
- Recognize the different types of insurance.
- Compute/Calculate the costs of insurance.
- Identify the benefits of insurance policies.
- Read and explain an insurance chart.
- Recognize the policy differences and what each entails.
- Compute the difference, both compulsory and optional coverage.
- Differentiate between policies.
- Examine health care coverage plans and calculate premiums.
- Understand why one policy is more beneficial than another.
- Understand the cost of deductibles on a policy.
Students understand that:
- Multiple types of insurance are computed differently and offer specialized benefits.
- Being able to read an insurance premium chart will increase your knowledge of deciding which policy will be more beneficial to you.
- Compulsory and optional coverage will determine the cost of insurance.
- Reviewing and calculating different policies could reduce your overall premium payments.
- Coverage can be affected by selecting a higher or lower deductible.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>What type of insurance is needed for sickness? Car accidents? Death? Flooded basements? What factors influence insurance costs?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplar High Quality Unit Task</td>
<td>Students will be able to determine which insurance is required for various scenarios.</td>
</tr>
</tbody>
</table>

**Map of Student Learning by Learning Objective**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can identify and compare the most common types of insurance and be able to calculate the costs and benefits of selected plans.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts.</td>
<td>Intro to Insurance (NGPF) - Other Types of Insurance (NGPF)</td>
<td>ELA: Using Canva, create a brochure on the most common types of insurance. MATH: Divide students into groups and allow them to collaborate on calculating</td>
<td>Equipment List by CTE Cluster</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learning Activity Checklist Link to Differentiation Examples</td>
<td></td>
<td>Link to Helpful Tech Tools</td>
</tr>
</tbody>
</table>

- ELA: Using Canva, create a brochure on the most common types of insurance.
- MATH: Divide students into groups and allow them to collaborate on calculating.
<table>
<thead>
<tr>
<th></th>
<th>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</th>
<th>the costs and benefits of different insurance plans with given scenarios.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can determine the cost of a particular insurance policy and why they would select one policy over another by explaining it utilizing an insurance premium chart.</td>
<td></td>
<td>How Health Insurance Works (NJAES Rutgers)</td>
<td>ELA: Public Speaking; Students will be given a particular insurance policy. They will argue why their policy is better than the others in a debate format.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SCI: Evaluate the pros and cons of healthy choice to life insurance policy rates.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MATH: Create charts or tables to compare costs of different insurance policies.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can evaluate proposals for automobile insurance and determine costs of both compulsory and optional coverage.</td>
<td></td>
<td>Auto Insurance (NGPF)</td>
<td>SCI: Relate automobile safety crash ratings to premium costs. How IIHS determines automobile safety crash ratings?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MATH: Writing prompts: Students are to determine costs of compulsory and optional coverage of some given automobile insurance proposals and evaluate each scenario to choose the best value product.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
</tbody>
</table>
| Students can analyze a health insurance coverage plan and calculate premiums based on selected options, and discuss the reasoning for selecting a particular option. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. 
Unit project incorporating all learned skills and concepts. 
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | **Health Insurance 101 (NGPF)** | ELA: Once students have selected their best option, they will create a TikTok promoting that particular health insurance policy. 
SCI: Analyze health insurance coverage plans by utilizing the Scientific Method. 
MATH: Students will be able to solve word problems about premiums for a health insurance coverage plan based on selected options. | Internet 
Computer 
Whiteboard/Interactive board 
Projector 
Calculator 
Handouts |
|---|
| Students can compute the effects of deductibles on policy costs and determine whether to accept a higher or lower deductible. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. 
Unit project incorporating all learned skills and concepts. 
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | **Financial Impact of Insurance (NGPF)** | MATH: Students will be able to compute deductibles on policy costs in word problems. | Internet 
Computer 
Whiteboard/Interactive board 
Projector 
Calculator 
Handouts |
Key Vocabulary

life insurance, health insurance, property insurance, homeowners/renter’s insurance, automobile insurance, disability insurance, pet insurance, long-term care insurance, travel insurance, umbrella insurance, flood insurance, premium, monthly, quarterly, semi-annual, annual, deductible, coverage, compulsory, optional, liability, collision insurance, comprehensive insurance, bodily injury liability, property damage liability, uninsured and under-insured coverage, balance billing, co-insurance, co-payment, excluded services, grievance, prescription coverage, primary provider, primary physician, emergency services, network, non-preferred provider, short-term insurance

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Local insurance agent guest speaker, field trip to local insurance agent office

CTSO Connection:

DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event

Certification/Credential Connection:

Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)
Unit 11 Title: Ratios and Proportions

Content Standards

19. Discuss the terms ratio and proportion and explain how they are used for calculations in different business situations.
   19a. Use ratios to evaluate profitability, efficiency, and leverage.
   19b. Use ratios to express the quantitative relationship between two amounts of inventory and explain how the business will be impacted by inventory figures.
   19c. Analyze and explain methods for solving business problems involving proportions and how the results lead to increased productivity.
   19d. Use ratios, proportions, and percentages to solve problems involving financial calculations.

Unpacked Learning Objectives

Students know:
   ● What the different ratios are that are used for determining company stability.
   ● What the different calculations are for each of the ratios.
   ● Should the ratio be used for solvency?
   ● Should the ratio be used for measuring potential earnings?
   ● Should the ratio be used to reflect management’s use of the assets.
   ● How ratios measure the different inventory amounts
   ● What ratio data needs to be determined.
   ● How to determine the working capital.
   ● What are the liabilities and for current assets
   ● How to operate financial calculators.
   ● What formulas to use for financial calculations

Students are able to:
   ● Explain the terms - ratios and proportions.
   ● Explain how ratios and proportions affect financial decision making.
   ● Assess profitability ratios for a company.
   ● Measure a company’s assets and manage its liabilities effectively.
   ● Determine the good or bad risk of a company.
   ● Determine profitability for working capital of assets.
   ● Compute the proportions, percentage and ratio of inventory using financial calculations.

Students understand that:
   ● The ratio metric compares the quantities of two different categories but a proportion metric finds the quantity of one category from the
business situation.
● Each of the ratios measures different financial aspects and help determine the financial healthiness of a company.
● Ratios help evaluate the financial condition of a business.
● Using financial calculation can determine if certain liabilities are positively or negatively affecting the outcome of the business.
● The use of financial calculators can be beneficial in computing calculations quickly and effectively.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>How can ratio and proportions be used in business?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplar High Quality Unit Task</td>
<td>Students will be able to use ratios and proportions to determine calculations in various business scenarios.</td>
</tr>
</tbody>
</table>

**Map of Student Learning by Learning Objective**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can define ratio terms and proportions. Students can compare and contrast the different calculations that occur in businesses.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts.</td>
<td><strong>Learning Activity Checklist</strong></td>
<td><strong>Math Skills Overview Guide (Davenport University)</strong> <strong>9 Business Formulas Math Haters Can’t Ignore (Patriot)</strong></td>
<td><strong>Equipment List by CTE Cluster</strong> <strong>Link to Helpful Tech Tools</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Link to Differentiation Examples</strong></td>
<td>ELA: Students can use Vocabulary Quadrants to enhance their vocabulary development. ELA: Writing: Using either the point-by-point or subject-by-subject compare/contrast format,</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can demonstrate how to use profitability, efficiency and leverage ratio financial metrics from financial statements.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>4 Ways to Assess Your Business (BDC) Financial Analysis (Finance Management)</td>
<td>MATH: Writing prompt: Students are to explain how to use profitability efficiency and leverage ratio financial metrics to assess the business performance.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Students will demonstrate how to use two ratio expressions to express the quantitative relationship between two amounts of inventory and explain how the business will be impacted by inventory figures.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>64 Examine the Efficiency of Inventory Management Using Financial Ratios How Do You Analyze Inventory on the Balance Sheet?</td>
</tr>
<tr>
<td>Students will evaluate financial statements to determine how liabilities might affect overall success for a company.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>How to Evaluate a Company's Balance Sheet (Investopedia) The Impact of Expenses on the Balance Sheet (Accounting Tools) Financial Statement Analysis (Investopedia)</td>
<td>ELA: Using a social media platform, students will post a video of them evaluating financial statements. Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Students will compute financial calculations for ratios, proportions, and percentages.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>How to Calculate Ratios (Indeed) Ratios, Proportions, and Percentages (Open Learn)</td>
<td>MATH: Students will be able to solve word problems using ratios, proportions and percentage. Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
<td></td>
</tr>
</tbody>
</table>
Key Vocabulary

ratio, proportions, working capital, solvency ratios, profitability ratios, activity ratios, return on investment, debt ratio, debt to equity ratio, assets, liabilities, revenue, operating costs, balance sheet, shareholder's equity, efficiency ratios, gross profit, cost of goods sold, earnings, financial analysis, return on invested capital, return on capital employed, profit margins, return on sales, inventory turnover, current ratio, return on owner's equity, financial calculations, financial calculators

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Guest speaker from local accounting agency; field trip to local accounting agency

CTSO Connection:

DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event

Certification/Credential Connection:

Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)
Unit 12 Title: Depreciation

Content Standards

20. Compare and contrast the straight-line method, declining balance method, sum of the years digits method, and the modified accelerated cost recovery system (MACRS) method to calculate depreciation.
20a. Calculate the straight-line depreciation of plant assets for a year and describe the benefits and/or drawbacks of using this method.
20b. Calculate the depreciation expense on plant assets by the sum of the year’s digits and declining balance methods and explain the benefits of using each method.
20c. Calculate the modified accelerated cost recovery system depreciation of plant assets and describe its benefits.
20d. Use the straight-line depreciation method to find the value of an asset.

Unpacked Learning Objectives

Students know:
- The methods to use in computing the different depreciation types.
- What are the types of accelerated depreciation?
- What methods are used to determine straight line depreciation by calculating depreciation and amortization.
- What are the benefits and drawbacks of this method?
- What are the types of accelerated depreciation?
- What is the formula for determining the declining balance method?
- Difference in the two types of MACRS.
- Difference between the characteristics of assets.
- Differences between asset classes.

Students are able to:
- Explain the differences in the different methods of depreciation.
- Compute the different types of depreciation calculations.
- Understand that by using this method, the company is computing an asset over a longer period of time.
- Explain that this method has drawbacks and benefits of a long purchase time, but that will affect the account on a yearly accounting form.
- Compute the straight line depreciation method.
- Explain that the declining balance method is an accelerated depreciation system of recording larger depreciation expenses during the earlier years of an asset’s useful life while recording smaller depreciation during its later years.
- Compute the plant asset utilizing the MACRS method.
- Explain that MACRS allows a business to recover the cost basis of certain assets that deteriorate over time.
- List the provision that the IRS provides on which assets are eligible for MACRS and what useful life figure should be used.
- Explain the depreciation is faster in the first years of an asset’s life and slows depreciation later on.
● Determine the value of an asset by utilizing the straight line method.

Students understand that:
● Depreciation methodically accounts for decreases in the value of a company’s assets over time.
● Straight Line Depreciation is easy to calculate and understand, although there are some drawbacks to this method.
● This method is suitable for small businesses.
● Over the usefulness of the product repairs and maintenance charges increase.
● This method is ideal for assets that quickly lose their values or inevitably become obsolete.
● The MACRS method is used to allow companies to recover the depreciation cost of certain assets over time.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>Why are different types of depreciation used in business?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplar High Quality Unit Task</td>
<td>Students will be able to calculate the different types of depreciation to determine which method is best for various business scenarios.</td>
</tr>
</tbody>
</table>

Map of Student Learning by Learning Objective

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will explain the different methods for calculating depreciation and the general accounting</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>What are the Different Ways to Calculate Depreciation? (Investopedia)</td>
<td>ELA: Using MyStorybook.com, students can write a children’s book, including Internet Computer Whiteboard/Interactive board</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Alabama State Department of Education, Career and Technical Education/Workforce Development, Plans of Instruction Updated as of Jan 8, 2022
| principles that accountants must adhere to. | Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | GAAP: What are Generally Accepted Accounting Principles? (Nerdwallet)  
straight line depreciation of a year of a plant asset.  
Students can explain the benefits and drawbacks of this method. | images, explaining the different methods for calculating depreciation and the general accounting principles that accountants must adhere to.  
MATH: Project: Students will calculate depreciation of different products over a timeframe using different methods. | Projector Handouts |
|---|---|---|---|---|
| Students will demonstrate how to compute straight-line depreciation of a year of a plant asset. Students can explain the benefits and drawbacks of this method. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.  
Unit project incorporating all learned skills and concepts.  
Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter & exit slips, self-assessment | Straight Line Depreciation Calculator (Calculator Soup)  
Straight Line Basis (Investopedia)  
ELA: Students will create a Google Slideshow to support an oral presentation demonstrating how to compute straight-line depreciation of a year of a plant asset. They will include a correctly formatted Works Cited slide.  
MATH: Project: Students will be given real world scenarios where they will compute straight-line depreciation of a year of some plant asset and state the benefits and drawbacks of the methods.  
SCI: Create spreadsheet formulas to compute straight-line depreciation. | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |
<p>| Students will compute the declining balance method of depreciation of a plant asset. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | Declining Balance Method Definition (Investopedia) | Declining Balance Depreciation Calculator (Calculator Soup) | ELA: Using Padlet, students will submit benefits of the declining balance method from their research in order to guide classroom discussion. MATH: Solve word problems about declining balance method of depreciation and compare the result with straight-line depreciation. | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |
| Students will explain the benefits of using this method. | Unit project incorporating all learned skills and concepts. | | | |
| Students can explain the tax break benefits of this method. | Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment | The Best Method of Calculating Depreciation for Tax Reporting (Investopedia) | | ELA: Students can create a mind map using Coggle to explore the benefits of this method. | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |
| Students can compute the straight line method to determine the value of an asset. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | How to Calculate Straight Line Depreciation (The Blueprint) | | MATH: Solve word problems about the value of an asset using straight line method. | Internet Computer Whiteboard/Interactive board Projector Calculator Handouts |</p>
<table>
<thead>
<tr>
<th>Unit project incorporating all learned skills and concepts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative: Observations of student progress—classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Key Vocabulary

internal revenue, income tax, intangible assets, balance sheet, GAAP, straight line methods, declining balance method, sum of the years digits method, modified accelerated cost recovery system (MACRS) method, original cost, scrap value, useful life, accelerated depreciation, ACRS, straight-line depreciation, depreciation, financial statements, plant asset, salvage value, physical assets, amortization, fixed asset, asset cost, salvage value, useful life, depreciation factor, asset, long-term tangible assets, Works Cited

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Calculate the depreciation of equipment in a computer lab.

CTSO Connection:

DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event

Certification/Credential Connection:

Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)
Unit 13 Title: Inventory

Content Standards
21. Tabulate costs associated with inventory to support business productivity.
   21a. Explain effective management of inventory.
   21b. Calculate the cost and value of inventory.
   21c. Analyze the rate of inventory turnover.
   21d. Determine the value of ending inventory using average cost (weighted average), first in first out (FIFO), and last in first out (LIFO) and present scenarios in which each method is preferred.

Unpacked Learning Objectives

Students know:
- Difference cost associated with inventory.
- Inventory cost of all unsold goods.
- Depreciation and loss of different warehouse costs.
- What are the techniques for saving money?
- How does inventory management improve cash flow?
- How does organizing inventory management assist warehouse management?
- What are the techniques to improve customer retention?
- How to determine the cost of goods.
- How to determine gross profit.
- How to calculate the cost of goods sold.
- What is the cost of inventory
- What is the average inventory
- Calculations for computing inventory turnover.
- Formulas for calculating FIFO, LIFO and Average Cost.
- How to determine the ending value of inventory.

Students are able to:
- Compute the different types of inventory cost.
- Explain how inventory management processes keep track of company’s goods from the beginning of when the products are received to checked out of a warehouse.
- Understand the different components of calculating cost and value of inventory.
- Understand that inventory turnover measures how many times in a given period a company is able to replace the inventories that it has sold.
- Compute FIFO, LIFO and Average Cost.
- Determine which calculation should be implemented in calculating inventory cost.

**Students understand that:**

- Businesses need to be able to compute inventory cost to determine productivity rate.
- Effective inventory management supervises the flow of goods from the manufacturers to warehouses by keeping detailed records of each product as it enters and leaves.
- Many factors go into determining the cost and value of inventory and that financial statements use the gross profit method.
- Computing inventory turnover can help businesses make better decisions on pricing, manufacturing, marketing, and purchasing new inventory.
- Companies need to understand the cost of goods sold.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>What roles does inventory play in a business?</th>
<th>How do you determine the value of inventory?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplar High Quality Unit Task</td>
<td>Students will be able to calculate costs of inventory and determine how it affects business.</td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
</tbody>
</table>
| Students should be able to identify all business expenses related to inventory. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | **Learning Activity Checklist**  
What is Inventory? Types, Examples and Analysis (Oracle NetSuite)  
Inventory Management (Investopedia) | SCI: Research modern technology used to assist with inventory data collection.  
MATH: Create spreadsheets to record business expenses related to inventory. | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |
| Students can demonstrate the understanding of how inventory flows from start to finish. | Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. | **Understanding Inventory** (Lumen Boundless Accounting)  
What is Inventory? (CFI) | ELA: Using **Flow Chart Templates**, students will create their flowcharts demonstrating the understanding of how inventory flows from start to finish. | Internet  
Computer  
Whiteboard/Interactive board  
Projector  
Calculator  
Handouts |
<table>
<thead>
<tr>
<th>Students can determine the cost and value of inventory.</th>
<th>Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</th>
<th>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</th>
<th>Understanding Inventory (Lumen Boundless Accounting) The Key to Using Inventory Cost Accounting Methods in Your Business (NetSuite) MATH: Project: Students will work in groups on a financial report in google doc to determine the cost and value of inventory using proper accounting principles and rules in order to ensure companies do not overstate their costs as a part of inventory control technique. The report should reflect how proper inventory control within a supply chain can help reduce the total inventory costs and assists in determining how much product a company should carry by using numerical data.</th>
<th>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will determine the rate of inventory turnover.</td>
<td>Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>How to Calculate Inventory Turnover Ratio (Investopedia) What is Inventory Turn Ratio? (The Balance) MATH: Create tables to record different inventory data and determine the rate of the turnover.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator</td>
</tr>
</tbody>
</table>
### Key Vocabulary

- inventory, cash flow, ordering costs, inventory holding costs, shortage costs, spoilage costs, inventory carrying costs, inventory management, warehouse, raw materials, components, finished products, purchasing department, production department, First In First Out (FIFO), Last In First Out (LIFO), dropshipping, just in time delivery, lean manufacturing, cost, value schedule-variance, cost variance, schedule performance index,
cost performance index, inventory turnover, cost of goods sold, average value of inventory, opportunity cost, obsolete inventory, return on investment, average cost, inventory, GAAP

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

| Assist cafeteria/snack store/school store with inventory control |

CTSO Connection:

| DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event |

Certification/Credential Connection:

| Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate) |
Unit 14 Title: Business Calculations

Content Standards
22. Calculate and assess future costs of operation.
   22a. Estimate transportation costs.
   22b. Estimate equipment maintenance costs.
   22c. Calculate future equipment costs including taxes and transfer costs.
   22d. Analyze and track business income.
   22e. Analyze business income statements.
   22f. Analyze staffing costs and prepare staffing cost estimates, including recruitment, training, and hiring.
   22g. Explain the history and principles of lean manufacturing.
   22h. Find the inventory break-even point in a given scenario.

Unpacked Learning Objectives

Students know:
- What data is needed to compute the cost associated with transporting inventory?
- What affects transportation cost?
- What affects equipment cost?
- What affects future equipment cost?
- What would determine the additional cost and taxes on equipment?
- Steps for tracking business expenses and business income.
- What is the structure of the financial statements?
- What are the strategies the company needs to pursue?
- What are the assigned fees for staffing companies?
- What are the costs of recruiting and hiring?
- What are estimated training expenses
- What expenses will cost to recruit?
- What is lean?
- What is the historical meaning around lean?
- What is 5S?
- What are the targeted desired sales?
- What are the metrics and calculations?
- What is the fixed cost of production?
Students are able to:
- Determine the cost associated with transportation cost of inventory for businesses.
- Determine how to compute transportation cost for moving inventory.
- Determine how to compute equipment cost for a business.
- Determine how to compute the future equipment cost.
- Identify additional taxes and transfer costs that will need to be included.
- Categorize transactions in a spreadsheet.
- Calculate the profitability of a business over a specific period of time.
- Prepare a staffing budget and plan.
- Explain the meaning of lean.
- Demonstrate the 5S principles.
- Determine what the units of a product that must be sold to cover fixed and variable cost of production.

Students understand that:
- The inventory cost is the total of all the expenses related to storing unsold goods.
- Transportation costs relate to all raw materials, finished products and employee expenses. It is all the expenses behind making sure all inventory gets to the customer on time.
- The most important factor of maintenance cost is equipment cost, which involves anything from spare parts and consumables.
- When computing equipment costs, many other factors contribute to determine the cost in the future.
- Tracking business expenses and income on a regular basis gives you the most up-to-date financial information about your business.
- Once the statements are completed can you trust the data that has been provided to you is correct calculated information?
- Budgeting for a staffing company takes many factors into play from recruiting, training and staffing.
- Many companies use the 5S Lean Manufacturing Plan in today's businesses.
- Break-even analysis measures margins of safety but is needed for business profitability.

<table>
<thead>
<tr>
<th>Unit Driving/Essential Question</th>
<th>What factors influence future costs of operations? How does a business prepare for future costs of operations?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplar High Quality Unit Task</td>
<td>Students will be able to explain why it is important to prepare for future costs of operations.</td>
</tr>
</tbody>
</table>
### Map of Student Learning by Learning Objective

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can compute transportation costs of inventory.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td><strong>Transport Costs</strong> (<a href="http://TransportGeography.org">TransportGeography.org</a>)</td>
<td>SCI: Research how transportation relates to environmental changes and carbon footprint issues. Students will debate how to reduce transportation needs. MATH: Students will be able to solve word problems about transportation costs of inventory.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can compute equipment maintenance costs for a business.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td><strong>How to Track and Handle Your Maintenance Cost</strong> (<a href="http://LimbleCMMS">Limble CMMS</a>)</td>
<td>MATH: Create spreadsheets in google sheets to record and compute equipment maintenance costs for a business with a given timeframe.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
<tr>
<td>Students can compute the future cost of equipment cost with the addition of taxes and transfer cost.</td>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>What Costs are Included with Property, Plant, and Equipment? (Principles of Accounting)</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Students can select the appropriate accounting method based on the size of a business.</td>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Best Accounting Methods for Small Businesses (Fundera) Cash vs Accrual Accounting Methods (Business News Daily)</td>
</tr>
<tr>
<td>Students can explain the components of a business statement.</td>
<td>Students can explain the cost of hiring and retaining employees.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</strong></td>
<td><strong>classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit project incorporating all learned skills and concepts.</td>
<td>Unit project incorporating all learned skills and concepts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Top 10 Components of a Good Business Plan (Smart Assets)</strong></td>
<td><strong>Study: Turnover Costs Employers $15,000 per Worker (HR DIVE)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Shark Tank Teaching Guide (Scholastic)</strong></td>
<td><strong>Employee Retention: The Real Cost of Losing an Employee (Peoplekeep)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELA: Using Bubbl.us, students can create a mind map detailing the components of a business statement and provide an example of each component using a mainstream product.</td>
<td>ELA: Use VoiceThread to make a podcast on the cost of hiring and retaining employees and share it. Classmates can comment on the podcast.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCI: Relate positive work environment sites (safety, clean air, lighting, etc) to retained employees.</td>
<td>SCI: Relate positive work environment sites (safety, clean air, lighting, etc) to retained employees.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH: Project: Students will do research and calculate average turnover costs employers have to pay per employee.</td>
<td>MATH: Project: Students will do research and calculate average turnover costs employers have to pay per employee.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students can explain the specified values and principles of Lean.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>What are the Five Principles of Lean (Taskworld) Teaching Lean Principles Through Simulation Games (ASEE)</td>
<td>ELA: Students will work collaboratively to create a poster illustrating the five specified values and principles of Lean.</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts Game Pieces</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Students can compute break-even points for goods and services.</td>
<td>Summative: Unit exam with multiple choice, fill-in-blank, and/or short answer questions. Unit project incorporating all learned skills and concepts. Formative: Observations of student progress-classwork rubric, class discussions, quizzes, enter &amp; exit slips, self-assessment</td>
<td>Break Even Analysis (EconEdLink)</td>
<td>MATH: Project: Students will calculate break-even points for goods and services with different scenarios. For example, if a company has $10,000 in fixed costs per month, and their product has an average selling price (ASP) of $100, and the variable cost is $20 for each product, that comes out to a contribution margin per unit of $80. How many units does the company have to sell to make $0 in net profit?</td>
<td>Internet Computer Whiteboard/Interactive board Projector Calculator Handouts</td>
</tr>
</tbody>
</table>
Key Vocabulary

inventory carrying cost, current assets, write offs, revenue, gross profit, operating income, net income, logistics, raw materials, finished products, transportation terms, cargo, freight trains, FTL Trucks, economy of scale, economy of distance, equipment cost, expense, assets, purchase, fixed assets, depreciation, premiums, hazard insurance, rental property, infrastructure, preventative maintenance costs, transfer cost, depreciation, fixed costs, variable costs, labor costs, rentals, ownerships, cash flow, transactions, bank accounts, income, gains, losses, staffing companies, cost based payment, capital expenditure budget, staffing, scheduling, agency fees, bonuses, 5S, just-in-time, Jidoka, line control, root cause analysis, SMART Goals, continuous improvement, waste, break even point, break-even price, purchase price, price levels, margin of safety, gross profit margin, underlying assets, commission

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Complete a business plan, Guest speaker - local business inventory manager, accountant

CTSO Connection:

DECA - Accounting Applications Series, Business Finance Series Event, Financial Consulting, Financial Services Team Event

Certification/Credential Connection:

Adobe Certified Associate (ACA) – Photoshop / Dreamweaver / Premier Pro / InDesign / Illustrator, ASK Institute – Concepts of Entrepreneurship and Management / Fundamental Business Concepts, Certiport- Entrepreneurship and Small Business (must hold concentrator status), IC3 Global Standard 6 (or higher), Microsoft Office Expert 2019/365 - Access / Excel / Word, Microsoft Office Specialist 2019/365 (MOS) (Two of the following areas REQUIRED: Excel Associate / Outlook Associate / PowerPoint Associate / Word Associate)