

Alabama

STATE STANDARD OR BENCHMARK:	CORRELATES WITH:
Algebra with Finance	
Banking Services	
1. Understand long-term costs associated with borrowing money.	Unit 1, Ch. 1, 2 Unit 2, Ch. 4, 5
a. Calculating cost of credit card interest with benefits.	Unit 2, Ch. 4
b. Utilizing and understanding amortization tables for loans. Examples: stocks, certificates of deposit, mutual funds, retirement income, savings accounts, 401K	Unit 2, Ch. 4, 5 Unit 3, Ch. 8
2. Evaluate banking services for varying purposes including checking, savings, loans, and market investments.	Unit 1, Ch. 3
3. Utilize exponential functions to compare compound interest and simple interest.	Unit 1, Ch. 2 Unit 3, Ch. 8
a. Deriving formulas and use iteration to compute compound interest.	Unit 1, Ch. 2 Unit 3, Ch. 8
b. Creating, interpreting, and analyzing a graph, table, and equation to compare compound interest and simple interest.	Unit 1, Ch. 2 Unit 3, Ch. 8
c. Applying findings to short-term, long-term, single deposit and periodic deposit accounts Examples: Using simple interest formula $I + PRT$ and using inverse operations to solve for all variables	Unit 1, Ch. 1, 2 Unit 3, Ch. 8
d. Interpreting the limit notation	
e. Modeling an infinite series and finding a finite sum for an infinite series with common ratio $\frac{1}{2}$	
f. Computing limits of polynomial functions as $x \rightarrow \infty$	
g. Computing Annual Percentage Yield (APY) where $APY = (1 + r/n)^n - 1$, given the Annual Percentage Rate (APR)	Unit 1, Ch. 2 Unit 2, Ch. 4 Unit 3, Ch. 8
h. Adapting algebra from banking formulas for input into a spreadsheet	
Investing	
4. Read, interpret, and algebraically model stock ownership and transaction data.	Unit 3, Ch. 8

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a. Constructing, interpreting, and analyzing scatterplots by utilizing linear, quadratic, and regression equations to see a complete picture of supply, demand, revenue, and profit	Unit 2, Ch. 6 Unit 3, Ch. 8
b. Constructing algebraic ratios and proportions	Unit 1, 2, 3, 4
c. Recognizing, representing, and solving proportional relationships using equations.	Unit 1, 2, 3, 4
d. Determining percent increase/decrease of monetary amounts	Unit 1, 2, 3, 4
e. Constructing and interpreting scatterplots	Unit 1, 2, 3, 4
f. Identifying form, direction and strength from a scatterplot	Unit 1, 2, 3, 4
g. Evaluating and using functions to model relationships between quantities	Unit 1, 2, 3, 4
h. Translating verbal situations into algebraic linear functions and quadratic function	Unit 1, 2, 3, 4
i. Creating algebraic formulas for use in spreadsheets	Unit 1, 2, 3, 4
j. Evaluating and using functions to model relationships between algebraic fractions, ratios, and proportions	Unit 1, 2, 3, 4
Employment and Income Taxes	
5. Evaluate the impact of taxes on business ownership including property tax, sales tax, social security, retirement, and disability benefits.	Unit 4, Ch. 11
a. Critiquing gross pay and net pay to determine total salary deductions	Unit 4, Ch. 11
6. Evaluate insurance needs and their financial impact for various businesses and industries.	Unit 3, Ch. 9
7. Use linear and polynomial functions to model Internal Revenue Service and Social Security Administration regulations using linear and polygonal functions.	
a. Identifying continuous and discontinuous functions by their graphs	
b. Graphing pay schedules	
c. Graphing continuously polynomial functions with multiple slopes and cusps	
Automobile Ownership and Operation	
8. Calculate the long-term impact of major purchases on budgets.	Unit 1, Ch. 1, 2, 3 Unit 2, Ch. 4, 5, 6
a. Critiquing and comparing options for purchasing an automobile including leasing, purchasing by cash, and purchasing by loan. Examples: calculating heart rate, measuring medication according to patient weight, using blueprints or a scale drawing	Unit 1, Ch. 1, 2, 3 Unit 2, Ch. 4

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b. Interpreting and analyzing various functions, graphs, graphs, and data analysis in order to make a responsible automobile purchase and to maintain the operation of an automobile. Example: model exponential depreciation as $y = Px^b$ where P is the purchase price and $x < 1$, and compare the depreciation to an increasing linear expense function	Unit 2, Ch. 4
c. Computing braking distance using the formula $BD = 5(.1s)^2$	
d. Computing distance, rate, and time using $D = RT$, $R = D/T$, and $T = D/R$	
e. Using geometry theorems involving chords intersecting in a circle and radii perpendicular to chords to determine yaw mark arc length	
f. Computing total stopping distance of an automobile	
g. Calculating miles per gallon and distance using the formula $D = MPG(G)$	
Mathematical Operations	
9. Use mathematical operations in the workforce using whole numbers including addition, subtraction, multiplication, and division to solve complex problems. Examples: Calculating bricks needed to build a structure, inventorying supplies, calculating hinges needed to build a set of cabinets, calculating tile needed to floor a room, calculating timber estimates for a landowner, calculating change for a customer, calculating electrical usage	Unit 1, 2, 3, 4
a. Using mathematical operations including addition and subtraction using negative numbers	Unit 1, 2, 3, 4
b. Solving problems that require multiple mathematical operations. Example: calculating material based on unit size and total amount needed	Unit 1, 2, 3, 4
10. Solve real-world business and industry problems involving mathematical operations with fractions, decimals, and percentages.	Unit 1, 2, 3, 4
a. Finding a common denominator in fractions	Unit 1, 2, 3, 4
b. Finding equivalent fractions in lowest terms	Unit 1, 2, 3, 4
c. Multiplying mixed numbers	Unit 1, 2, 3, 4
11. Calculate averages, simple ratios, simple proportions, or rates using whole numbers and decimals. Examples: calculating heart rate, measuring medication according to patient weight, using blueprints or scale drawings	Unit 1, 2, 3, 4
12. Convert numbers from one form to another using whole numbers, fractions, decimals, or percentages.	Unit 1, 2, 3, 4
a. Converting units of money and time from one form to another	Unit 1, 2, 3, 4

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13. Solve multi-step real-world word problems, first, by placing information in the correct order, then, performing calculations. Examples: calculating insurance premiums for a customer who has multiple types of policies, calculating the total cost of materials based on quantity, cost, and shipping and handling	Unit 1, 2, 3, 4
14. Analyze a set of data utilizing mean, median, and mode. Examples: calculating germination rate of seeds, determining success rate of various products passing a quality control test, calculating risk analysis for a job safety plan	Unit 1, 2, 3, 4
Consumer Credit	
15. Use algebraic proportions and exponential growth and decay to make wise credit decisions.	
a. Creating, evaluating, and interpreting algebraic proportions	Unit 1, 2, 3, 4
b. Determining the curve of best fit using linear, quadratic, or cubic regression equations	
c. Using exponential growth and decay equations that model given relationships between quantities	Unit 3, Ch. 8
d. Calculating finance charge at various percentages	Unit 2, Ch. 4
Independent Living	
16. Evaluate offers, such as advertisements, warranties, and guarantees, from producers and suppliers to make wise consumer decisions.	Unit 2, Ch. 6 Unit 3, Ch. 7
17. Compare and contrast housing options including rentals, lease to purchase, mortgage, or purchasing by cash.	Unit 2, Ch. 4
a. Evaluating the various mortgage products available	Unit 2, Ch. 4
b. Computing monthly mortgage payments at various terms and interest rates	Unit 2, Ch. 4
c. Comparing mortgage payments and increasing resale value of a home using a future value of a periodic deposit formula	Unit 2, Ch. 4
d. Modeling rent increases using exponential relationships	
18. Solve real-world and mathematical problems involving perimeter, circumference, area, volume, and surface area. Examples: Fence a yard, lay carpet in a room, frame a picture, sewing clothing, paint a room, install a cabinet, tile a floor, and fill a pool	
a. Determining surface area and volume of irregular shapes including spheres, cylinders, or cones. Examples: determining storage needs for materials, determining packaging	
b. Determining the circumferences of circles	

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c. Determining area of various shapes including rectangles, squares, parallelograms, triangles, trapezoids, circles, regular polygons, irregular polygons	
Retirement Planning and Budgeting	
19. Compare personal, state, and federal retirement plans to develop a retirement and personal budget plan.	Unit 3, Ch. 8
a. Analyzing overall debt, cash flow, and resources to determine net worth	
b. Using the future value of a periodic investment formula to predict balances in future years	Unit 3, Ch. 8
c. Identifying the effect that a change in multipliers has to the value of an algebraic expression	
d. Creating rational expressions to represent increase over time	
e. Creating and interpreting a graph showing linear and a piecewise function and determining the point of intersection	
f. Interpreting points on a budget line graph in the context of their relationship to the budget line	
Career Mathematics	
Entrepreneurial Economics and Finances	
3. Use algebraic and geometric reasoning and problem-solving skills to make informed financial and economic decisions, including those involving banking and investments, insurance, personal budgets, credit purchases, recreation, and deceptive and fraudulent pricing and advertising.	Unit 1, 2, 3, 4
a. Create graphs and tables related to personal finance and economics. The use of appropriate technology is encouraged for numerical and graphical investigations.	Unit 1, 2, 3, 4
b. Analyze job opportunities and career pathways related to business or industry.	Unit 2, Ch. 5 Unit 4, Ch. 11
c. Evaluate the economics of establishing and owning a business.	Unit 4, Ch. 11
d. Make inferences and justify conclusions from economic conditions that can affect hiring and layoff decisions.	
4. Use formulas or equations of functions to calculate outcomes and analyze models of exponential growth or decay.	Unit 1, 2, 3, 4
a. Interpret depreciation cost of decay relationships. Example: Analyze the depreciation cost of owning your own business.	

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5. Approximate rates of change of nonlinear relationships from graphical and numerical data. Example: Determine the relationship between the sales weight of cattle and the amount of feed provided.	
a. Graph functions expressed in tables, equations, or classroom-generated data to model consumer costs and to predict future outcomes.	Unit 1, 2, 3, 4
b. Analyze interest rates, depreciation, and tax rates in order to determine how each affects the cost of owning and/or operating a business.	Unit 1, 2, 3, 4
6. Summarize and interpret data represented in tables or graphs in order to make predictions.	Unit 1, 2, 3, 4
a. Predict trends about population change that will affect employment rate.	
b. Calculate pay scale based on occupational outlook projections.	
c. Calculate operating costs, including cost of materials, supplies, equipment, license fees, and insurance fees.	Global Econ Digital Module
d. Construct charts that reflect current demographics in various industries.	Global Econ Digital Module
e. Forecast growth and decline of various career fields by interpreting data from charts and graphs.	
Career and Technical Education Performance Objectives	
Personal Finance	
Consumer Decisions and Behavior	
Compare factors that impact consumer purchasing decisions throughout the life span. <ul style="list-style-type: none"> Examples: personal choice and values, attitudes, wants and needs, social influences 	Unit 1, Ch. 1, 2, 3 Unit 2, Ch. 6 Unit 3, Ch. 7, 10
Describe state and federal consumer protection laws for individuals and families, including identity protection and credit laws.	Unit 2, CH. 4, 6 Unit 3, Ch. 8, 9
Determine procedures for resolving consumer problems and complaints.	Unit 2, Ch. 6
Explain the importance of taking responsibility for personal financial decisions.	Unit 1, 2, 3, 4
Money Management	
Determine factors that affect money management, including career choice, education, skills, and economic conditions. <ul style="list-style-type: none"> Identifying opportunity costs of financial decisions 	Unit 1, Ch. 1, 2 Unit 2, Ch. 5, 6 Unit 3, Ch. 7, 8 Unit 4, Ch. 11

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<p>Explain how taxes, government transfer payments, and employee benefits relate to disposable income.</p> <ul style="list-style-type: none"> Comparing net and gross income 	Unit 4, Ch. 11
<p>Determine practices that allow individuals and families to maintain financial security.</p> <ul style="list-style-type: none"> Examples: determining needs and wants, creating a budget, setting goals, keeping records, developing a personal financial plan, saving, investing 	Unit 1, 2, 3, 4
<p>Compare money-management tools and services available from financial institutions.</p> <ul style="list-style-type: none"> Examples: checking and savings account statements, online banking procedures, direct deposit, money transfer services, loans, online payment services 	Unit 1, Ch. 2, 3 Unit 2, Ch. 4
<p>Explain factors that affect creditworthiness.</p> <ul style="list-style-type: none"> Assessing credit options available to individuals and families Identifying ways to avoid or correct credit problems Analyzing dangers incurred by young adults with credit cards Determining sources, types, and risks of loans for individuals or families Describing the steps in obtaining a credit report 	Unit 1, Ch. 1, 2, 3 Unit 2, Ch. 4, 5
<p>Compare benefits of saving and investing for individuals or families, including factors that affect the rate of return on investments, sources of investment information, characteristics of savings and investment options, and stages of investing.</p> <ul style="list-style-type: none"> Calculating annual interest and annual yield 	Unit 1, Ch. 2 Unit 3, Ch. 8
<p>Distinguish between retirement and estate planning options available to individuals and families.</p>	Unit 3, Ch. 8, 9
<p>Compare types, lengths, and costs of care, life, health, disability, homeowner, and renter insurance, including disability, waiting period, and disability benefits.</p> <ul style="list-style-type: none"> Exploring the impact of uninsured and underinsured motorists Explaining the difference between independent insurance agencies and franchised agencies 	Unit 3, Ch. 9
Consumer Spending	
<p>Critique the impact of advertising and sales propaganda on individual and family spending decisions.</p>	Unit 1, Ch. 1 Unit 2, Ch. 6
<p>Analyze shopping skills in relation to individual and family resource management across the life span.</p>	Unit 1, Ch. 1, 2, 3 Unit 2, Ch. 4, 6 Unit 3, Ch. 7
<p>Determine strategies for acquiring the most economical product or service.</p>	Unit 2, Ch. 4, 6 Unit 3, Ch. 7, 8, 9
<p>Determine factors that affect the cost of goods and services, including sales tax, tips, coupons, discounts, and unit pricing.</p>	Unit 1, Ch. 2, 3 Unit 2, Ch. 6 Unit 3, Ch. 7

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Prioritize steps involved in making consumer purchases, including transportation and housing	Unit 1, Ch. 2, 3 Unit 2, Ch. 4, 5, 6 Unit 3, Ch. 7, 8, 9 Unit 4, Ch. 10
Explain career options and entrepreneurial opportunities related to the management of personal financial resources.	Unit 2, Ch. 5 Unit 4, Ch. 11
Workforce Essentials Performance Objectives	
Career Development and Employability Skills	
Explain how to research and select career opportunities	Unit 2, Ch. 5 Unit 4, Ch. 11
Compare the relationship between educational achievement and career planning.	Unit 2, Ch. 5 Unit 4, Ch. 11
Apply skills needed for seeking, obtaining, maintaining, and changing jobs, including preparing a résumé, completing job applications, participating in a job interview, and dressing and grooming for the workplace.	Unit 4, Ch. 11
Leadership and Teamwork	
Explain leadership skills and practices. <ul style="list-style-type: none"> • Identifying appropriate leadership styles • Discussing effects of communication in various settings <ul style="list-style-type: none"> ○ Examples: pairs, small groups, teams, large groups 	Unit 4, Ch. 11
Cooperative Education Seminar Performance Objectives	
Demonstrate skills needed in managing personal finances, including maintaining personal checking and savings accounts, evaluating available credit sources, and preparing state and federal income tax forms.	Unit 1, Ch. 2, 3 Unit 2, Ch. 4, 5 Unit 4, Ch. 11
Social Studies Performance Objectives	
Economics	
SS.E.1 Explain the role of scarcity in answering the basic economic questions of what, how, how much, and for whom to produce	Unit 2, Ch. 6 Global Econ Digital Module
SS.E.4 Explain the impact of the labor market on the market economy of the United States	Unit 2, Ch. 6
SS.E.4 Explain the competitive nature of the market system	Unit 2, Ch. 6 Unit 4, Ch. 11 Global Econ Digital Module

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SS.E.6 Explain costs and benefits of government intervention in the economy of the United States	Unit 1, Ch. 1, 2 Unit 2, Ch. 6 Unit 3, Ch. 7
SS.E.10 Explain the role of money and the structure of the banking system of the United States	Unit 1, Ch. 2, 3
Career Preparedness	
Personal Decision Making	
1. Demonstrate knowledge of a systematic approach to a decision making process (specifically opportunity costs and trade-offs), including factors regarding academic planning and career development, financial literacy, and technology.	Unit 1, 2, 3, 4
Academic Planning and Career Development	
2. Understand the effect of workplace behaviors.	Unit 4, Ch. 11
a Examine appropriate workplace behaviors.	Unit 4, Ch. 11
3. Analyze personal skills, interests, and abilities and relate them to current career opportunities.	Unit 2, Ch. 5 Unit 4, Ch. 11
a Participate in assessments that identify personal areas of interest and aptitude, including utilizing results to develop a four-year high school educational plan.	Unit 2, Ch. 5 Unit 4, Ch. 11
b Explore individual career options from the 16 National Career Clusters to examine specific job descriptions, requirements, salaries, and employment outlooks.	Unit 2, Ch. 5 Unit 4, Ch. 11
4. Determine the correlation of personal preference, education, and training to the demands of the workforce.	Unit 2, Ch. 5 Unit 4, Ch. 11
a Select a personal career goal based upon results of interest and aptitude assessments.	Unit 2, Ch. 5 Unit 4, Ch. 11
b Investigate employee benefits and incentives related to identified career choices.	Unit 4, Ch. 11
c Calculate net pay from a given gross salary by subtracting required and non-required deductions.	Unit 4, Ch. 11
5. Investigate the postsecondary/higher education admissions process, including completing admission and financial aid applications.	Unit 2, Ch. 5
6. Examine the employment process, including searching for a job, filling out a job application, writing a resume, developing and practicing interview skills, and completing required employment forms.	Unit 4, Ch. 11
7. Generate an electronic portfolio using digital tools including a cover letter; a current resume; a completed job application; interest, aptitude, and achievement assessment results; etc.	Unit 2, Ch. 5 Unit 4, Ch. 11

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Technology Skill Applications	
14. Explain specific steps that consumers can take to minimize exposure to identity theft, fraudulent schemes, unethical sales practices, and exorbitant service fees.	Unit 2, Ch. 4 Unit 3, Ch. 9
Managing Finances and Budgeting	
15. Develop a plan for managing earning, spending, saving, and giving using spreadsheets, online resources, or commercial software.	Unit 1, 2, 3, 4
a Create a budget, net worth statement, and income expense statement using a spreadsheet.	Unit 1, 2, 3, 4
b Utilize spreadsheet features, including formulas, functions, sorting, filtering, charts, and graphs.	Unit 1, Ch. 2, 3
c Identify types of income other than wages, including rent, interest, and profit earned from various resources.	Unit 1, Ch.2 Unit 3, Ch. 8
d Evaluate various methods for acquiring goods and making major purchases.	Unit 1, Ch. 2, 3 Unit 2, Ch. 4, 6
16. Evaluate the effect of personal preferences, advertising, marketing, peer pressure, and family history on consumer choices and decision making in the marketplace.	Unit 1, Ch. 1, 3 Unit 2, Ch. 4, 6 Unit 4, Ch. 10
a Compare goods and services to determine best value, including sales tax, tips, coupons, discounts, product quality, and unit pricing.	Unit 1, Ch. 3 Unit 2, Ch. 5, 6 Unit 3, Ch. 7, 8, 9
b Explore how to use different payment methods.	Unit 1, Ch. 3 Unit 2, Ch. 4
Saving and Investing	
17. Distinguish differences between the purpose of saving and the objectives associated with investing.	Unit 1, Ch. 2 Unit 3, Ch. 8
a Explain how using the principles of compound interest and the Rule of 72 in investing builds wealth to meet financial goals.	Unit 1, Ch. 2 Unit 3, Ch. 8
b Evaluate various ways to buy and sell investments, including mutual funds, exchange-traded funds, stocks, bonds, CD's, real estate, and commodities.	Unit 3, Ch. 8
Banking and Financial Institutions	
18. Analyze various types of financial institutions.	Unit 1, Ch. 2, 3 Unit 2, Ch. 4 Unit 3, Ch.8, 9

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a Evaluate services and related costs associated with financial institutions in terms of personal banking needs.	Unit 1, Ch. 2, 3 Unit 2, Ch. 4 Unit 3, Ch.8, 9
19. Demonstrate how to manage checking and savings account, balance bank statements, and use online financial services.	Unit 1, Ch. 2, 3
Credit and Debt	
20. Determine advantages and disadvantages of using credit.	Unit 2, Ch. 4, 5
a Analyze credit card offerings for the effect on personal finances.	Unit 2, Ch. 4
21. Examine why credit ratings and credit reports are important to consumers.	Unit 2, Ch. 4
a Explain ways of building and maintaining a good credit score.	Unit 2, Ch. 4
b Determine the implication of entering into contracts and binding agreements.	Unit 2, Ch. 4, 5 Unit 4, Ch. 10
c Describe legal and illegal types of credit that carry high interest rates, including payday loans, rent-to-buy agreements, and loan-sharking	Unit 2, Ch. 4
d Assess the implications of bankruptcy.	Unit 2, Ch. 4
Risk Management and Insurance	
22. Determine the type of insurance associated with different types of risks, including automobile, personal and professional liability, home, apartment, property, health, life, long-term care, and disability.	Unit 3, Ch. 9
a Analyze factors that reduce the cost of insurance.	Unit 3, Ch. 9
b Identify perils that are insurable.	Unit 3, Ch. 9
23. Develop a plan for financial security in the event of disaster, including secure storage of financial records and personal documents, available cash reserve, household inventory list, and medical records retention.	Unit 1, Ch. 2, 3 Unit 3, Ch. 9

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