

Title Financial Algebra - Applied and CP

| Unit: | | Managing Credit and Fundamental of Statistics | | | | | |
|--|---|--|-------------------------------------|--|--|---|----------------------------|
| Big Ideas: | | Construct different displays of debt values in various statistical representations. | | | | | |
| Unit Essential Questions: | | Why is it important to be in control of debt? How can credit concepts be represented statistically and graphically? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| Introduction to Course - 2 days | | | | Understand expectations of the course Interact with classmates appropriately. Provide teacher with preliminary feedback on financial knowledge and habits | Student survey, Financial BINGO, | Syllabus | |
| Managing Debt - 4 days | CCSS.PRACTICE.MP 6 CCSS.HSS.IC.A.1 CCSS.HSS.IC.B.6 | Payday loan Predatory lending | Why is it important to manage debt? | Calculate the interest accrued with different debt payoff methods Identify dangers of compounding debt Compare different debt repayment options available to debtors Learn about different types of predatory lending and how to avoid it Examine statistics on the prevalence and rates of debt in the U.S. | QUESTION OF THE DAY INFOGRAPHIC: Experian 2021 Consumer Credit Review GRAPH: Charting 17 Years of American Household Debt INFOGRAPHIC: The Consequences of Unpaid Debt VIDEO: Debt Snowball vs Avalanche Method: Best Way to Pay Off Debt? ACTIVITY: CALCULATE: Avalanche v. Debt Snowball VIDEO: Payday Loans Explained VIDEO: Payday Loans Can Trap Consumers With Interest Rates, Hidden Fees ARTICLE: How to Manage Debt of Any Size | ngpf Student activity packet Videos Articles | Debt payoff Comparisons WS |
| Box Plots - 3 days | CCSS.PRACTICE.MP 2 CCSS.PRACTICE.MP 4 CCSS.HSS.ID.A.1 CCSS.HSS.ID.A.2 CCSS.HSS.ID.A.3 | Mean Median Box plot | What are box plots? | Calculate measures of central tendency Identify outliers and explain their effects on central tendency calculations Create a 5 number summary of a data set Create a box plot to represent a data set Analyze data using a box plot, range, and interquartile range Compare student loan debt change | CALCULATE: Finding the Mean and Median Learn it: Describing a Data Set Practice it Learn it: Analyzing a Box Plot ACTIVITY: CREATE: Box Plot Jigsaw Application | ngpf Student activity packet Jigsaw - Regional Debt Box Plots Box Plot practice WS | Application |

Units can be covered in any order.

Title Financial Algebra - Applied and CP

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|-------------------------------------|---|---|---|---|---|---|----------------------|
| | | | | Analyze outstanding mortgage balances Graph and summarize auto loan data | | | |
| Review and Assess - 1 day | | | | | | | Lessons 1 and 2 Quiz |
| Your Credit History - 1 days | CCSS.PRACTICE.MP 4 CCSS.HSS.ID.A.1 | Fair Credit Reporting Act Dot plot Credit Utilization Ratio | What impact does credit history have on opportunities for loans? | Represent data using a dot plot Use relevant math vocabulary to describe dot plots, including median, mode, range, and outliers. Describe the purpose and components of a credit report Understand why interested parties may want to check your credit score Explain key components of the Fair Credit Reporting Act and how it impacts lenders and borrowers | DISCUSSION PROMPT: Imagine You're The Lender EDPUZZLE: Understanding Your Credit Report MATH CONNECTION - DOT PLOTS ACTIVITY: MOVE: Credit Dot Plots (Desmos) | ngpf Student activity packet EdPuzzle Article Activity - Credit Persona reports | |
| Histograms - 3 days | CCSS.PRACTICE.MP 2 CCSS.PRACTICE.MP 4 CCSS.HSS.ID.A.1 CCSS.HSS.ID.A.2 CCSS.HSS.ID.A.3 | Histogram Standard deviation | What is a histogram and how can it be used to represent financial situations? | Create a histogram given a data set Analyze the distribution, center, and variability of a histogram Identify the similarities and dissimilarities between a dot plot, box plot, and histogram that represent the same data set Compare two histograms that represent related data sets Represent and analyze real-world personal finance data, including student debt, credit scores, and housing costs, using histograms. | CALCULATE: Phone Battery Life VIDEO: Create a Histogram LEARN IT: Describing Distributions and Standard Deviation DESMOS: Polygraph: Guess the Distribution Application | ngpf Student Activity Packet Video Activity Desmos | Application |
| Credit Score - 2 days | CCSS.MP4 CCSS.HSA.REI.A.2 | Credit score Late payment Weighted average | What is a credit score and how is it calculated? | Calculate a weighted average of a data set Calculate credit utilization as a ratio Understand the factors that contribute to your credit score Explore how various common occurrences affect your credit score | VIDEO: What is a Credit Score? ARTICLE: How Does a Late Payment Affect Your Credit? INFOGRAPHIC: Late Payments ARTICLE: How to Calculate Your Credit Utilization Ratio ACTIVITY: MOVE: Up and Down with Credit Scores EDPUZZLE: No Credit Score, No Problem MATH CONNECTION - WEIGHTED AVERAGES | ngpf Student activity packet Video Articles Activity Weighted Average practice | |
| Review and Assess - 1 day | | | | | | | Lessons 3-5 Quiz |

Units can be covered in any order.

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|---|---|---------------------------|---|--|---|--|------------------|
| <p>Why your Credit Score Matters - 1 day</p> | <p>CCSS.PRACTICE.MP 2 CCSS.HSS.ID.A.1</p> | <p>relative frequency</p> | <p>Why is a credit score important?</p> | <p>Analyze data presented in a relative frequency histogram Understand why interested parties may want to check your credit score List ways to boost a low credit score or begin to gain a credit history if you have no score</p> | <p>QUESTION OF THE DAY: What's the average credit score needed to rent an apartment? INFOGRAPHIC: Why Does Your Credit Score Matter? EDPUZZLE: Boost Your Credit Score VIDEO: How to Start Building Credit from Scratch</p> | <p>ngpf Student Activity packet Edpuzzle Video Relative Frequency extra practice</p> | |
| <p>Review and Assessment - 2 days</p> | <p>All of above</p> | | | <p>All of above</p> | | <p>Study Guide</p> | <p>Unit Test</p> |

Chapter total = 20 days

Cumulative total = 20 days

Title Financial Algebra - Applied and CP

| Unit: | | Paying for College and Statistical Analysis (part 1) | | | | | |
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| Big Ideas: | | Study the advantages and disadvantages of going to college. Identify different options for how to pay for college and the pros and cons to each. Use two-way tables Understand correlations between variables | | | | | |
| Unit Essential Questions: | | What are options for paying for college? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| Alternatives to 4 year colleges - 1 day | PA BCIT 15.2.12.E | | Is college the best choice for you? | Analyze alternatives to 4 year colleges Take a skills/interest inventory to discover career options | | Nearpod lesson | |
| The Costs and Benefits of College - 3 days | CCSS.PRACTICE.M P3 CCSS.PRACTICE.M P4 CCSS.HSS.ID.A.1 | Sticker price Net cost Bachelor's degree Master's degree | What are the benefits of going to college? | Use box plots to analyze salaries for different educational situations Explain the pros and cons of college List the different costs associated with attending college Analyze income differences for varying education levels | VIDEO: Work or College? ARTICLE: Is College Worth The Cost? Pros Vs. Cons DATA CRUNCH: What's the Value of a College Major? ARTICLE: Quick Guide: College Costs INFOGRAPHIC: Sticker Price vs Net Cost MATH CONNECTION - COMPARING SALARIES USING BOX PLOTS | ngpf Student activity packet Video Article | Ticket-out |
| Correlation vs Causation - 4 days | CCSS.PRACTICE.M P3 CCSS.HSS.IC.A.1 CCSS.HSS.IC.B.3 CSS.HSS.IC.B.4 | Correlation causation | What is the difference between correlation and causation? | Define correlation, causation, samples, and populations Explain the difference between correlation and causation Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each. Compare college testing and admissions statistics Examine the relationship between college cost and graduation rates | CONSIDER: Drawing Conclusions EDPUZZLE: Correlation - The Basic Idea Explained ARTICLE: What is Considered to Be a "Strong" Correlation? PICK TWO: Correlation VIDEO: Types Of Studies Explained Application | ngpf Student activity packet EdPuzzle Article Video Application packet Textbook Section 1.5 | Application level 3 |
| Review and assess - 0.5 | All of above | | | All of above | | | Quiz 2.1 and 2.2 Quiz |

Units can be covered in any order.

Title Financial Algebra - Applied and CP

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| <p>Two-way Tables - 2.5 days</p> | <p>CCSS.PRACTICE.M P2 CCSS.PRACTICE.M P4 CCSS.HSS.ID.B.5 CCSS.HSS.ID.C.9</p> | <p>Categorical data relative frequency table Two-way tables Association</p> | <p>What are two-way tables and how do they help to organize information?</p> | <p>Identify different types of data, including categorical, numerical, discrete, and continuous. Summarize categorical data using two-way tables Interpret data in relative frequency tables in context, including identifying associations. Analyze real-world data about education and employment</p> | <p>ANALYZE: Prom Decisions VIDEO: Types of Data: Categorical vs Numerical Data VIDEO: Two-Way Tables PRACTICE IT Learn it: Relative Frequency Table EXPLORE IT: Playing with Percentages Learn It: Associations Between Variables Application</p> | <p>ngpf Student activity packet Videos Application packet Textbook section 4.4</p> | <p>Application</p> |
| <p>Applying for the FAFSA - 2 days</p> | <p>CCSS.PRACTICE.M P3 CCSS.PRACTICE.M P4 CCSS.HSS.ID.B.5 CCSS.HSS.ID.C.9</p> | <p>FAFSA</p> | <p>What is the FAFSA?</p> | <p>Summarize categorical data using two-way tables Interpret data in relative frequency tables Explain the role the FAFSA plays in the financial aid process Understand the importance of submitting the FAFSA Identify common misconceptions surrounding the FAFSA process</p> | <p>EDPUZZLE: FAFSA Overview ARTICLE: Major FAFSA changes MATH CONNECTION - FAFSA COMPLETION AT YOUR SCHOOL</p> | <p>ngpf Student activity packet Articles Activity</p> | <p>Ticket-out</p> |
| <p>Review and assessment - 2 days</p> | <p>All of above</p> | | | <p>All of above</p> | | <p>Kahoot Review Assessment</p> | <p>Assessment</p> |

Chapter total = 15 days (+5 from part 2)

Cumulative total = 35 days

Title Financial Algebra - Applied and CP

| Unit: | | Taxes and Fundamentals of Algebra | | | | | |
|---|---|---|---|--|--|--|---|
| Big Ideas: | | Utilize various forms of rational numbers when discussing taxes. Calculate percentages as they pertain to taxes. Express relationships in functional notation and other formats, such as tables and graphs. | | | | | |
| Unit Essential Questions: | | How do we pay taxes and how are our tax dollars used? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| Fractions and Tax Dollars - 4 days | CCSS.PRACTICE.MP 2 CCSS.HSN.RN.B.3 CCSS.HSN.Q.A.1 | Rational numbers Income taxes Payroll tax Self-employment tax Sales tax | What are rational numbers? How are rational numbers used in real world problems? What are the similarities and differences between payroll tax and self-employment tax? How does sales tax vary among states and how is it calculated? | Define rational numbers Express rational numbers as a fraction, decimal, and percent, and convert between the three Multiply rational numbers to solve word problems Understand how the federal government spends income tax dollars Explain the similarities and difference between payroll taxes and self-employment taxes Explain how sales tax is calculated, and how it differs between states and local areas | ACTIVITY: MOVE: Your Tax Dollar in Action Learn it: Fractions, Decimals, and Percents Video: What are rational numbers? 5-point practice Learn it: Multiplying with rational numbers Application: Calculating Taxes | ngpf Student Activity Packet Video on rational numbers Application packet | 5-point practice Application |
| Review and Assess - 1 day | | | | | | | Lesson 1 quiz |
| Your Paycheck - 2 days | CCSS.PRACTICE.MP 6 CCSS.7.RP.A.3 | Pay stub W4 | What information is available on a pay stub? How and when is a W-4 completed? What are common payroll deductions? | Calculate percentages Read a pay stub Complete a W-4 Identify common payroll deductions | VIDEO: FinCap Friday: That's Gross! Article: Types of Income VIDEO: Filling Out the W-4 Form ARTICLE: What are Payroll Deductions? EDPUZZLE: How to Read a Pay Stub Math Connection: Analyzing percentages | ngpf Student activity packet Videos Articles Edpuzzle | Edpuzzle |
| What is a function - 5 days | CCSS.PRACTICE.MP 1 CCSS.PRACTICE.MP 4 | Function Functional notation Domain | How can functional notation be used | Understand and create an expression in function notation Evaluate the domain and range of a function from its constraints | Learn it: What is a function? Practice it: Function notation Learn it: Evaluating functions Learn it: Domain and Range | ngpf Student activity packet Application packet | Application Function Notation Practice WS |

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| | CCSS.HSA.CED.A.1 CCSS.HSA.REI.A.1 CCSS.HSF.IF.A.2 CCSS.HSF.IF.B.5 CCSS.HSF.BF.A.1 | Range | to represent real world scenarios? How do the domain and range of a function related to the real world scenario? How can functional notation be used to represent different taxes? | Represent real world scenarios as a function Evaluate functions for a specific input value or set of values Understand how to model and calculate different types of taxes | Practice it: Evaluating functions, domain, and range Application: Prices and Discounts EDPUZZLE: Composition of functions Application: Level 3 Part II Composition of Functions | | |
| Chapter Review and Assessment - 2 days | All of above | | All of above | All of above | | Review/Study Guide Assessment | Chapter Test |
| Types of Taxes - 5 days | CCSS.PRACTICE.MP 4 CCSS.HSM CCSS.HSS.IC.B.6 | Data Line graph Stacked bar graph Property tax Assessed value Regressive Progressive Proportional | What are the different ways that we pay taxes? What are income taxes and payroll taxes? How are state taxes spent? | Analyze data presented in a line graph and stacked bar graph Distinguish between common taxes, including income tax, payroll tax, property tax, and sales tax Explore how different types of taxes and variation in state taxes lead to individuals paying varying amounts of taxes Determine whether a tax is regressive, progressive, or proportional | INFOGRAPHIC: 9 Types of Taxes in the US ARTICLE: What are Income Taxes? ARTICLE: What is a Payroll Tax? ARTICLE: How Are My State Taxes Spent? VIDEO: Your Property Tax Assessment: What Does It Mean? DESMOS: Exploring State and Local Tax Rates INFOGRAPHIC: Progressive, Regressive, or Proportional? INTERACTIVE: International Tax Rates | ngpf Student activity packet Articles Desmos activities Textbook Sections 5.5 and 10.2 and Chapter 6 | Section 4 quiz |
| Graphing Functions - 2 days | CCSS.PRACTICE.MP 4 CCSS.HSF.IF.B.4 CCSS.HSF.IF.B.5 | Ordered pairs Coordinate plane Gross pay Net pay | How are functions represented as graphs, tables, equations, etc? How is net pay calculated from gross pay? | Graph ordered pairs on a coordinate plane Describe a situation using words, equations, tables and graphs State the domain and range of a function using inequality notation Calculate gross and net pay | Learn it: Different ways to represent functions CARD SORT: Four Views of a Function Learn it: Input and Output 5-Point Practice: Domain and Range Application: Analyzing a Paycheck | ngpf Student activity packet Desmos activities Textbook Section 6.2 | 5-point practice Application |
| The US Tax System - 3 days | CCSS.PRACTICE.MP 2 CCSS.PRACTICE.MP 4 CCSS.HSA.SSE.A.1 CCSS.HSA.CED.A.1 CCSS.HSA.REI.A.1 CCSS.HSF.BF.A.1 | Deductions Credits Earned income tax Unearned income tax | How can piecewise functions be used in a realistic context? What is the difference between tax | Use piecewise-linear equations without graphing in a realistic context Calculate using percentages Deconstruct a larger problem into smaller, constituent problems to solve | VIDEO: Types of Income REFERENCE: Earned vs. Unearned Income ARTICLE: The difference between tax credits and deductions and why it matters REFERENCE: Taxes Flowchart | ngpf Student activity packet Videos Articles Edpuzzle Textbook Chapter 6 | ACTIVITY: Income tax brackets (1-5) (questions 1-8) |

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| | | | deductions and tax credits? What is the difference between unearned and earned income tax? | Differentiate between deductions and credits on a U.S. tax return Compare and contrast the many different deductions available Differentiate between earned and unearned income and their tax implications Examine tax breaks that apply specifically to students and recent graduates | ARTICLE: Increase Your Tax Refund With Above-the-Line Deductions ARTICLE: Itemized Deductions: What They Are and How They Can Slash Your Tax Bill EDPUZZLE: How Tax Brackets Actually Work ACTIVITY: MATH: Income Tax Brackets | | |
| Piecewise Functions - 2 days | CCSS.PRACTICE.MP 4 CCSS.PRACTICE.MP 6 CCSS.HSF.IF.A.2 CCSS.HSF.IF.B.4 CCSS.HSF.IF.B.5 CCSS.HSF.BF.A.1 | Piecewise equation Continuous Discontinuous Marginal tax systems Effective tax rate Marginal tax rate | How is it determined whether a graph is continuous or discontinuous? How is the marginal tax system represented by a piecewise function? | Write equations for piecewise functions Read the graphs of piecewise functions Identify whether functions are continuous or discontinuous Represent stepped tax rates using piecewise functions Use piecewise functions to deepen understanding of marginal and effective tax rates for income or payroll taxes | ANALYZE: Which Graph Fits? Learn it: Piecewise functions 5-point Practice: Writing equations for piecewise functions Learn it: Graphs of piecewise functions 5 point practice: Writing Equations for Piecewise Functions DESMOS: Piecewise functions with tax rates | ngpf Student activity packet Desmos activity Textbook Section 6.2 | 5-point practice Desmos activity |
| File your taxes - 1 days | CCSS.PRACTICE.MP 6 CCSS.HSN.Q.A.3 | W-2 1099 tax return | What are W-2 and 1099 forms used for? | Calculate percentages Differentiate between earned and unearned income Explain what W-2 and 1099s are used for and how they are different from each other Explain the difference between a tax credit and a tax deduction Calculate taxes using US federal tax brackets, deductions, and credits | REFERENCE: Do I need to file a return? EDPUZZLE: What's a W-2 Form? VIDEO: 10 Things You Should Know About 1099s ACTIVITY: CALCULATE: Your Federal Taxes from W2 and 1099 income (CP additional questions) ARTICLE: Top 21 independent contractor jobs | ngpf Student activity packet Video Edpuzzle Textbook Section 6.3 | |
| Chapter Review and Assessment - 2 days | All of above | | All of above | All of above | | Lessons 4-8 Study Guide Assessment | Chapter Test |

Chapter total - 29 days

Cumulative total - 64 days

Units can be covered in any order.

Title Financial Algebra - Applied and CP

| Unit: | | Checking and Linear Equations | | | | | |
|--|--|---|---|--|---|---|-----------------------------------|
| Big Ideas: | | Understand the purpose and benefits of a checking account. Understand strategies to avoid banking fees. Utilize linear equations to represent banking situations. | | | | | |
| Unit Essential Questions: | | What is the purpose of a checking account? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| How Checking Works - 3 days | CCSS.PRACTICE.MP1 CCSS.PRACTICE.MP4 CCSS.HSF.IF.B.4 CCSS.HSF.IF.C.9 | Checking account Bank statement Balance Unbanked Pie chart Bar graph | What are the benefits of having a checking account? | Compare two different graph representations of account balance data Analyze real-world data presented in a pie chart and bar graph. Explain the purpose and benefits of a checking account Read a bank statement Analyze the consequences of not being in the banking system | Graph: How do people pay for stuff? Learn it: Article: The Complete Guide to Checking Accounts Infographic: Good Reasons to Open a Checking Account Video: How to Read Your Bank Statement and Why it's Important to do so Video: Spent: Looking for Change Graph: Why are Many Americans Unbanked Math Connection: Representing Data Activity: Fine Print: Checking Account Statement | ngpf Student activity packet Videos Articles Textbook Section 2.1 | Fine Print Activity (Google form) |
| Beware of Banking Fees - 2 days | CCSS.PRACTICE.MP6 CCSS.HSN.Q.A.1 | Fee Overdraft Transfer | | Identify common checking account fees and how to avoid them Explain how overdraft protection works and the impact of overdraft fees Compare overdraft policies at major US banks Calculate with percents using appropriate units | Learn it: Article: 8 Common Bank Fees Explained Video: Bank Overdraft Fees Article: 7 Mobile Banking Alerts Everyone Math Connection - Percentages Activity: Compare: Overdraft fees | ngpf Student activity packet Video Articles Textbook Section 2.1 | Analyze Activity |

Title Financial Algebra - Applied and CP

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| <p>Linear Growth Patterns - 0 days</p> | <p>CCSS.PRACTICE.MP4 CCSS.PRACTICE.MP7 CCSS.HSF.BF.A.1 CCSS.HSF.LE.A.1.B CCSS.HSF.LE.A.2</p> | <p>Linear function</p> | <p>How can linear functions be used to represent financial situations?</p> | <p>Explore and describe linear functions using pattern recognition Identify the initial value and rate of change of a linear pattern Write an equation for a linear function based on pattern</p> | <p>Calculate: How does the pattern grow? Activity: Create: Linear Patterns Jigsaw Application: Linear Growth Patterns</p> | <p>ngpf Student activity packet Jigsaw paper Application packet</p> | <p>Jigsaw Ticket-out</p> |
| <p>Writing Linear Equations - 2 days</p> | <p>CCSS.PRACTICE.MP4 CCSS.PRACTICE.MP7 CCSS.HSF.BF.A.1 CCSS.HSF.LE.A.1.B CCSS.HSF.LE.A.2</p> | <p>Slope-intercept form initial value</p> | <p>How can linear functions be used to represent financial situations?</p> | <p>Write a linear equation in slope-intercept form from a table and word problem Evaluate a linear expression by plugging in a given x-value.</p> | <p>Calculate: Linear Patterns Linear Equations in Slope-Intercept Form Writing a Linear Equation from a Table 5-point practice Writing a Linear Function from a Word Problem Practice: Writing Linear Equations from Word Problems KAHOOT: Applications of Linear Equations Application: Linear Equations of Checking Fees (level 3)</p> | <p>ngpf Student activity packet Application packet</p> | <p>5-point practice Application WS</p> |
| <p>Review and assess - 1</p> | <p>All of above</p> | | | <p>All of above</p> | | | <p>Quiz 4.1, 4.2, and 4.4</p> |
| <p>Graphing Linear Equations - 1 day</p> | <p>CCSS.PRACTICE.MP4 CCSS.PRACTICE.MP7 CCSS.HSF.IF.B.4 CCSS.HSF.IF.B.5</p> | | <p>How can the slope-intercept form of an equation be used to construct the graph of a line?</p> | <p>Graph a linear equation using slope-intercept form Make connections between sign and size of slope and the graph Use graphs to represent real world wage scenarios</p> | <p>Compare: ATM Fees Learn It: Graphing Linear Equations using Slope-Intercept Form 5-point practice: Graphing Linear Equations using Slope and y-intercept Application: Graphing Wages</p> | <p>ngpf Student activity packet Desmos graphing calculator Application packet</p> | <p>5-point practice Application Ticket-out</p> |

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| Online and Mobile Banking - 2 days | <p>Spending 9c: Research financial technology options for financial record-keeping Saving 3a: Research mobile payment account alternatives 3b: Compare and contrast the features of mobile payment accounts, cryptocurrency accounts, and checking/savings accounts 3c: Explain why storing money in a mobile payment account can reduce the ability to grow savings</p> | mobile banking online banking peer-to-peer payments | How does online and mobile banking differ from analog banking options? How can consumers be safe using online banking? | <p>Identify the benefits of account management services that financial institutions provide Compare and contrast checking and savings accounts Describe the benefits of compound interest vs. simple interest Identify how features of digital and traditional banking meet different banking needs Determine methods of controlling personal information in order to practice safe internet usage Identify sources of assistance in resolving identity theft and fraud Compare costs and benefits of P2P payment application types</p> | <p>EVERFI: Money Moves Course - Modern Banking & Identity Protection Module 1: Introductory financial concepts Module 2: Modern Digital Banking Module 3: Identity Theft and Protection Module 4: Peer-to-Peer Transactions</p> | <p>EVERFI Course Modules EVERFI Money Moves discussion guide Textbook Section 2.1</p> | <p>Module 1: Post Assessment Module 2: Post Assessment Module 3: Post Assessment Module 4: Post Assessment</p> |
| Review and assess - 2 days | All of above | | | All of above | | Study Guide | Unit Assessment |
| Scatter Plots and Linear Regression - 0 days | <p>CCSS.PRACTICE.MP4 CCSS.PRACTICE.MP5 CCSS.HSF.LE.A.2 CCSS.HSF.LE.B.5</p> | | | <p>Graph data point given in a table to create a scatter plot Use technology to find a linear regression equation Use a linear regression model to make predictions about the given data</p> | <p>Intro: Checking Account Balance vs Age Learn It: Scatter plots and correlation Activity: Graphing scatter plots and trend lines in Desmos Practice It: Use Desmos to Write a Linear Regression Model Application: Scatter Plots and Linear Regression</p> | <p>ngpf Student activity packet Applications Textbook Section 1.5</p> | Application |

Chapter total - 13 days
Cumulative total - 77 days

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| Midterm Review and Exam - 4 | | | | | | Midterm exam study guide | MidTerm Exam |
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Cumulative total - 81 days

Units can be covered in any order.

Title Financial Algebra - Applied and CP

| Unit: | | Paying for College and Statistical Analysis (part 2) | | | | | |
|--|------------------------------------|--|---|---|---|---|-------------------------|
| Big Ideas: | | Study the advantages and disadvantages of going to college. Identify different options for how to pay for college and the pros and cons to each. Use two-way tables Understand correlations between variables | | | | | |
| Unit Essential Questions: | | What are options for paying for college? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| Grants, Scholarship s, and Loans - 5 days | PA BCIT 15.2.12.E CC.2.2.HS.D.9 | loans scholarships grants subsidized loan unsubsidized loan PELL Grant | What does the financial aid process entail? | Reflect on personal financial aid situation Understand the financial aid process Analyze a FAFSA Submission summary Use an interest formula to calculate student loan debt Understand subsidized vs. unsubsidized loans Describe why federal student loans are superior to private student loans and parent PLUS loans | Financial Aid survey Infographic: Financial Aid Process ANALYZE: A FAFSA Submission Summary Article: College grants vs. scholarships vs. loans Podcast: Paying for college MATH CONNECTION: Calculating Interest | ngpf Student activity packet articles podcast | Paying for College Quiz |

Cumulative total: 86 days

| Unit: | | Saving and Systems of Equations | | | | | |
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| Big Ideas: | | Understand the purpose and benefits of a savings account. Utilize linear equations to represent banking situations. | | | | | |
| Unit Essential Questions: | | What is the purpose of a savings account and why is it important to save? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| Why Save? - 1 day | CCSS.PRACTICE.MP 1 CCSS.PRACTICE.MP 4 CCSS.HSF.IF.B.4 CCSS.HSF.BF.A.1 CCSS.HSF.IF.C.7.A | | Why is it important to save and have an emergency fund? | Analyze key features of linear graphs in context, including slope, y-intercept, and the intersection of two lines Graph linear equations representing a saving account balance with a constant rate of deposit Explore reasons for saving, including offsetting unexpected costs, managing variable income, and making large purchases Analyze real-world data related to saving | Video: 70 Men ages 5-75: What are you saving money for? Activity: It Costs HOW much? Video: Saving Tips for Building an Emergency Fund Analyze: Why Save? Calculate: Savings Over Time | ngpf Student activity packet Video Textbook Section 2.3 | |

Units can be covered in any order.

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| | | | | Identify common savings goals Describe the benefits of an emergency fund | | | |
| Graphing Systems of Equations - 3 days | CCSS.PRACTICE.MP 1 CCSS.PRACTICE.MP 4 CCSS.HSF.IF.B.4 CCSS.HSF.IF.C.7.A CCSS.HSF.BF.A.1 | System of equations Solution Quadrant | How can systems of equations be used to represent different savings concepts? | Graph systems of linear equations in slope-intercept form Identify solutions to systems of linear equations graphically Determine whether a system of linear equations has one solution, no solutions, or infinite solutions Compare different savings rates over time and how they impact the achievement of savings goals | Desmos: Systems of Two Linear Equations Learn It: Systems of Equations 5-point Practice: Graphing Systems of Equations Learn It: Number of Solutions Practice it Card Sort cut and paste Application: Graphing Systems of Equations (Writing Equations and graphing with Desmos) CP Application: Graphing Systems of Equations (Writing equations, comparing families and graph by hand) | ngpf Student activity packet Application packet | 5-point practice Pick 3 Practice Application |
| Writing Linear Equations in Standard Form - 2 days | CCSS.PRACTICE.MP 1 CCSS.PRACTICE.MP 4 CCSS.PRACTICE.MP 7 CCSS.HSF.BF.A.1 CCSS.HSF.IF.B.4 CCSS.HSA.CED.A.2 | Standard form Intercepts | How can equations written in standard form be used to represent financial situations? | Define quantities in a word problem algebraically Generate standard form equations from word problems Graph standard form equations on the coordinate plane Interpret the meaning of intercepts and intersections Convert linear equations from standard form to slope-intercept form | Calculate: Piggy Bank Math Learn It: Linear Equations in Standard Form Writing Standard Form Equations from a Word Problem Practice It: Pick 2: Writing Linear Equations in Standard Form Learn It: Graphing Linear Equations in Standard Form Practice It: Graphing Practice Graphing linear equations riddle worksheet | ngpf Student activity packet worksheet | Practice it: Pick 2 Graphing from standard form WS |
| Chapter Review and Assessment - 2 days | All of above | | All of above | All of above | | Study Guide Assessment | Lessons 1-3 Test |

Title Financial Algebra - Applied and CP

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|---|---|---|---|---|--|---|---|
| Manipulating Equations - 3 days | CCSS.PRACTICE.MP 2 CCSS.HSA.SSE.B.3 CCSS.HSF.BF.A.1 | Literal equations Simple Interest Compound Interest | How can equations be manipulated for various variables? | Solve literal equations for a given variable Explore simple interest and savings accounts Use the formula for simple interest to solve problems Investigate current interest rates on savings accounts | Calculate: Solving Equations Learn It: Solving Literal Equations 5-point Practice: Practice Solving Literal Equations Application: Manipulating Equations for Simple Interest Article: Interest on Savings Accounts | ngpf Student activity packet Application packet | 5-point practice Application |
| Challenges to Saving - 2 days | CCSS.PRACTICE.MP 3 | Paycheck-to-paycheck | What makes saving money so difficult? | Interpret real-world data presented in different types of charts and graphs Analyze factors that make saving challenging Describe what it's like to live paycheck to paycheck Reflect on the connection between income and saving | Fincap Friday: Gotta Habit Activity: Why does saving seem hard? Graph: Income growth dwarfed by rising costs Graph: For lower income americans, expenses far exceed income Video: What does it mean to live paycheck-to-paycheck Interactive: Living Paycheck to Paycheck SPENT | ngpf Student activity packet Video Interactive: SPENT Textbook Section 11.4 | SPENT Interactive reflection Ticket-Out |
| Review and Assess - 1 day | all above | | | | | | Quiz: Literal equations and savings |
| Strategies to Save - 2 days | CCSS.PRACTICE.MP 4 CCSS.HSF.BF.A.1 CCSS.7.RP.A.3 | 50/30/20 Rule | How can we be more disciplined to save money? | Learn the advantages of pay yourself first, the 50/30/20 Rule, and other strategies to help meet savings goals Realize that saving can be difficult when income is too small to cover necessities Recognize small ways to save that would work for your lifestyle | Calculate: Savings goals Edpuzzle: Pay Yourself First Graph: The 50/30/20 Rule Math Connection: Percents and the 50/30/20 rule Interactive: Income + Financial Stability in America Activity: How to Save Money: 27 Ways | ngpf Student activity packet Textbook Section 11.4 | |
| Chapter Review and Assessment - 2 days | All of above | | All of above | All of above | | Kahoot Assessment | Lessons 4-6 Test |

Title Financial Algebra - Applied and CP

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|--|---|--|--|--|---|--|--|
| <p>Solving by Substitution - 3 days</p> | <p>CCSS.PRACTICE.MP 4 CCSS.HSF.IF.B.4 CCSS.HSF.IF.B.5</p> | | <p>How can the method of substitution be used to solve systems of equations?</p> | <p>Solve systems of equations using the substitution methods Explore special cases of systems of equations Explore simple interest savings accounts</p> | <p>Graph: The problem with graphing Learn It: Solving Systems by Substitution 5-point Practice: Solve Systems by Substitution Learn it: Special Cases Learn It: Practice Solving Systems of Equations from Word Problems More Practice It Application</p> | <p>ngpf Student activity packet Application WS</p> | <p>5-point practice Application</p> |
| <p>Solving by Elimination - 3 days</p> | <p>CCSS.PRACTICE.MP 4 CCSS.HSA.REI.A.1 CCSS.HSA.REI.B.3 CCSS.HSA.REI.C.5</p> | | <p>How can the method of elimination be used to solve systems of equations?</p> | <p>Solve systems of linear equations by elimination Compare solution methods for systems of linear equations Make cost-benefit decisions Plan and budget for near-term savings goals</p> | <p>Learn it: Solving Systems by Elimination 5-point practice - Solve Systems by Elimination Learn it: Choosing a method Activity: Card Sort on Desmos Apply it: Break Even Point</p> | <p>ngpf Student activity packet Desmos activity</p> | <p>5-point practice Desmos Application</p> |
| <p>Review and Assess - 1 day</p> | <p>all above</p> | | | <p>Apply learned personal finance skills to a real-life simulation</p> | <p>The Budget Game at personalfinancelab.com</p> | | <p>Quiz: Lessons 7 and 8</p> |
| <p>Where to save? - 3 days</p> | <p>CCSS.PRACTICE.MP 2 CCSS.PRACTICE.MP 4 CCSS.HSF.LE.A.1 CCSS.HSF.IF.B.5 CCSS.HSA.REI.B.3</p> | <p>Banks Credit unions Simple interest Compound interest Certificate of Deposit Money Market Account</p> | <p>What are the options of places to save and what are the benefits of each one?</p> | <p>Explore compound interest equation Compare exponential and linear growth outcomes Distinguish between situations that can be modeled with linear functions and with exponential functions. Explain the difference between banks and credit unions Understand the difference between a checking and savings account Compare different types of savings accounts with their costs and benefits Explore alternatives to a traditional savings account Investigate modern saving apps that can integrate into a personal savings plan</p> | <p>Video Banks vs Credit Unions: What's the difference? Learn It: Video: What's the difference between checking and savings? Infographic: What is the difference between checking and savings accounts? Compare: Types of Savings Accounts Edpuzzle: Is the Saving Account dead? Activity: Savings...or NOT? Math Connection: Analyzing Equations</p> | <p>ngpf Student Activity Packet Articles Videos/EdPuzzle Activity Textbook Section 2.3</p> | <p>Activity Ticket-out</p> |

Title Financial Algebra - Applied and CP

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|--|---|---|---|--|---|--|------------------------------------|
| <p>Specialized Savings Accounts - 2 days</p> | <p>CCSS.PRACTICE.MP 3 CCSS.HSF.LE.A.1 CCSS.HSF.LE.A.3 CCSS.HSF.LE.B.5 CCSS.7.RP.A.3</p> | <p>529 Plans Health Savings Accounts</p> | <p>What are other options for saving money?</p> | <p>Analyze real world data presented graphically Calculate percent change Compare the graphs of exponential and linear growth in a real-world context Learn the basics of how 529s and HSAs work Understand the growth potential and tax benefits of specialized investment accounts Analyze how compounding builds wealth over time</p> | <p>Graph: Average college tuition & Costs 2020-2021 Video: The Difference Between Saving and Investing Vocabulary: investing terms Video: Investing Basics: The Power of Compounding Vocabulary: tax on growth Infographic and Graph: 529 Plans Video: Benefits of a Health Savings Account</p> | <p>ngpf Student activity packet Videos Articles Textbook Section 2.3-2.6</p> | <p>Ticket-out</p> |
| <p>Chapter Review and Assessment - 2 days</p> | <p>All of above</p> | | <p>All of above</p> | <p>All of above</p> | | <p>Review/Study Guide Assessment</p> | <p>Chapter Test (Lessons 7-10)</p> |
| <p>IRAs - 1.5 days</p> | <p>CCSS.PRACTICE.MP 3 CCSS.HSF.LE.A.1 CCSS.HSF.LE.A.3 CCSS.HSF.LE.B.5 CCSS.7.RP.A.3</p> | <p>IRA traditional IRA Roth IRA</p> | | <p>Analyze real world data presented graphically Calculate percent change Compare the graphs of exponential and linear growth in a real-world context Learn the basics of how IRAs work Understand the growth potential and tax benefits of specialized investment accounts Analyze how compounding builds wealth over time</p> | <p>Article: IRA: What it is, How it works, and How to get started? Math Connection: Analyzing Visual Data</p> | <p>Student activity packet articles</p> | |
| <p>TINFA videos - .5 days</p> | | <p>Cryptocurrency Day trading Gambling Investing Stock Diversification FOMO</p> | | <p>Introduce investing basics through the use of a documentary</p> | | <p>This Is Not Financial Advice videos: -Gambling vs. Investing -The Basics of Investing</p> | <p>While you Watch WS</p> |

Chapter total - 34 days
Cumulative total - 120 days

Units can be covered in any order.

Title Financial Algebra - Applied and CP

| Unit: | | Intro to Investing and Exponential Functions | | | | | |
|---|---|---|--|---|--|--|---|
| Big Ideas: | | Represent investment scenarios as exponential equations and functions. Understand different concepts of investing such as stocks, bonds, and more. | | | | | |
| Unit Essential Questions: | | What are options for investing? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| Why Should I Invest? - 2 day | CCSS.PRACTICE.M P1 CCSS.PRACTICE.M P2 CCSS.HSF.LE.B.5 | Investing | Why should someone invest? | Compare the exponential growth of investments and savings accounts with different rates of return Define investing and distinguish it from saving Identify reasons for investing, including outpacing inflation and building wealth Analyze how compounding builds wealth over time Reflect on how investing relates to wealth inequality | Question of the Day INFOGRAPHIC: A Simple Introduction to Investing EDPUZZLE: Understanding Inflation VIDEO: Investing Basics: The Power of Compounding ACTIVITY: ANALYZE: Inequalities in Investing MATH CONNECTION - EXPONENTIAL GROWTH - Desmos Growth of Savings vs Investments | ngpf Student activity packet Edpuzzle Videos Analyze activity Desmos activity | Ticket-out ANALYZE activity |
| Exploring Exponential Growth - 2 day | CCSS.PRACTICE.M P4 CCSS.HSF.LE.A.1 CCSS.HSF.LE.A.1.A CCSS.HSF.LE.A.3 | Exponential growth | How can patterns be represented exponentially? | Recognize that exponential patterns grow by a constant growth factor Distinguish between exponential and linear functions Recognize that investments grow exponentially | Compare: Which one doesn't belong? MOVE: Exponential Growth Exponential Patterns: Visual pattern cards COMPARE: Linear and Exponential Functions Practice it Application: Growth Factor and investments Applied (also CP version) | ngpf Student activity packet Application packet Desmos activities | Application |
| Writing Exponential Equations - 2 days | CCSS.PRACTICE.M P4 CCSS.PRACTICE.M P7 CCSS.HSF.LE.A.1.C CCSS.HSM | Exponential function | How can exponential equations be used to represent patterns? | Recognize and define the parts of an exponential function Write exponential functions to model a given situation Evaluate and solve exponential functions Analyze return on an investment given starting investment, rate of return and time periods | DISCUSSION PROMPTS: Repeated Doubling Learn It: Exponential Functions Practice It: Exponential Functions Exponential Equations extra practice WS | ngpf Student activity packet (CP version) Extra practice WS Application packet | Application |
| Review and assessment - 1 days | All of above | | | All of above | | | Quiz: Investing and Exponential growth |

Units can be covered in any order.

Title Financial Algebra - Applied and CP

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|--|---|--|-------------------------|--|--|--|---|
| <p>Stocks - 5 day</p> | <p>CCSS.PRACTICE.M P4 CCSS.HSF.IF.C.8 CCSS.HSF.LE.A.1 CCSS.HSF.LE.A.3</p> | <p>Stock market Stock exchange S&P 500 Dividends</p> | <p>What are stocks?</p> | <p>Compare linear and exponential growth patterns Apply compound interest formula over successive periods Calculate percent growth Define a stock and describe how it can make money Identify and name trends in the stock market as bullish or bearish Assess the risks of investing in stocks Calculate returns and return on investment Use stock quotes and a spreadsheet to track the value of an investment Explore historical stock prices for popular stocks</p> | <p>VIDEO: The Stock Market Explained INFOGRAPHIC: The Stock Market - Explained EDPUZZLE: Trends in the Stock Market INTERACTIVE: Can You Beat the Market? GRAPH: S&P 500 Total Index Returns 1957 - March 2020 INFOGRAPHIC: What Are Dividends? ACTIVITY: MATH: Return on Investment</p> | <p>ngpf Student activity packet Videos EdPuzzle Activity Textbook - Chapter 8 PROJECT: 5 stocks on your birthday</p> | <p>Ticket-out Return on Investment Activity (CP version) PROJECT: 5 stocks on your birthday</p> |
| <p>Chapter Review and Assessment - 2 days</p> | <p>All of above</p> | | <p>All of above</p> | <p>All of above</p> | | <p>Review/Study Guide Assessment</p> | <p>Chapter Test</p> |

Chapter total: 15 days

Cumulative total - 135 days

Title Financial Algebra - Applied and CP

| Unit: | | Types of Credit and Modeling Functions | | | | | |
|---|--|---|---|---|--|---|---------------------------------|
| Big Ideas: | | Apply concepts of interest, including compound interest, to different loan situations. | | | | | |
| Unit Essential Questions: | | What is the difference between simple and compound interest and why is it important to understand the difference? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| Credit Basics - 2 days | CCSS.PRACTICE.MP3 CCSS.HSA.SSE.A.1 CCSS.HSM CCSS.HSS.IC.B.6 | Debt Principal Interest rate Credit | What is meant by "credit?" | Calculate simple interest Read and interpret data presented as multi-line graphs and stacked line graphs Explain why a person may need or want credit and the impact of debt on American finances Identify the major types of credit and their characteristics Understand the three basic components of a credit agreement: principal, interest rate, and term Differentiate between interest rate and APR | PLAN AHEAD: How Would You Pay? VIDEO: 100 People Share How Much Debt They Have EDPUZZLE: Loan Basics ACTIVITY: MOVE: Credit Musical Chairs VISUALS: Interest Rate and APR Napkins ACTIVITY: ANALYZE: Household Debt and Credit Report | ngpf Student activity packet Video EdPuzzle Activities Textbook Section 3.1 | Ticket-out |
| Compound Interest Formula - 3 days | CCSS.PRACTICE.MP4 CCSS.HSF.LE.A.1.C CCSS.HSF.LE.A.2 CCSS.HSF.BF.A.1 | APY APR Compound interest | What does it mean for interest to be compounded and how is it calculated? | Use the compound interest formula given a financial situation and interpret its results Evaluate expressions given variable definitions Demonstrate how compound interest can affect future loan balances Explain the difference between APR and APY Calculate the future value of periodic investments | CALCULATE: Calculating Interest Explore It: Compound Interest Learn it: Using the Compound Interest Formula 5-Point Practice: Compound Interest Formula VIDEO: APR vs APY Application | ngpf Student activity packet Video Application packet Textbook Section 2.5 | 5-point practice Application |
| Auto Loans and Mortgages - 2 days | CCSS.PRACTICE.MP4 CCSS.HSM | Auto loan Mortgage | How do auto loans and mortgages compare to each other and other loans? | Evaluate expressions Explain the difference between secured and unsecured loans Compare how auto loans and mortgages are similar and different Demonstrate how interest rate, term, and down payment affect the monthly payments of a loan Describe the steps that a borrower should take if they fall behind on their loan payments | Discussion Prompt: Your Dream Home/Car VIDEO: All About Car Loans ACTIVITY: COMPARE: Auto Loans VIDEO: Mortgage Basics EXPLORE: What Home Value Can You Afford? ARTICLE: Top Reasons a Mortgage Differs from Other Loans | ngpf Student activity packet Videos Activities Article Textbook Section 4.2, 7.3-7.5 | Ticket-out |

Units can be covered in any order.

Title Financial Algebra - Applied and CP

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|---------------------------------------|---|--|---|---|---|--|-------------|
| | | | | | ARTICLE: What Can I Do If I Am Struggling With Secured Debt? ACTIVITY: MATH: Auto and Mortgage Monthly Payments | | |
| Student Loans - 2 days | CCSS.PRACTICE.MP2 CCSS.HSF.LE.B.5 CCSS.HSF.LE.A.1.C | Federal student loan Private student loan | What types of loans are available for higher education? | Calculate the future value of a periodic investment Analyze exponential growth rate using a real-world scenario about loan repayment and investment returns. Explain the difference between private and Federal loans, and summarize the different types of Federal loans Consider strategies to minimize student loan debt Understand the different loan repayment options available Analyze sample graduate profiles and choose the repayment option that works best in the context of an individual's situation | CONSIDER: Previewing Student Loans VIDEO: Federal vs. Private Student Loans ARTICLE: Choosing a Loan That's Right for You DATA CRUNCH: What's the Distribution of Federal Student Loan Debt in the U.S.? ARTICLE: How To Reduce Student Loan Debt While You're in School VIDEO: Repayment: What to Expect ACTIVITY: COMPARE: Which Repayment Option is Best? MATH CONNECTION - FUTURE VALUE OF A PERIODIC INVESTMENT on Desmos | ngpf Student activity packet Video Articles Data crunch Desmos activity Textbook Section 3.3 | Ticket-out |
| Review and assessment - 2 days | All of above | | All of above | All of above | | Review/Study Guide Assessment | Assessment |
| Recursive Sequences - 3 days | CCSS.PRACTICE.MP4 CCSS.HSF.IF.A.3 CCSS.HSF.BF.A.1 CCSS.HSF.BF.A.1.A CCSS.HSF.BF.A.1.B | Recursive sequences | What is a recursive sequence? | Write recursive formula for a given sequence Use a recursive formula to model debt repayment Calculate how a debt amount decreases over time, given the interest rate and regular payment amounts | INTERACTIVE: Tower of Hanoi Learn it: Recursive Sequences Explore it: Describing Sequences Learn it: Writing Recursive Formulas Practice it: The Tower of Hanoi Application | ngpf Student activity packet Application packet | Application |

Title Financial Algebra - Applied and CP

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|---|--|---|---|--|--|--|--------------------|
| <p>Building an Amortization Spreadsheet - 3 days</p> | <p>CCSS.PRACTICE.MP4 CCSS.HSF.IF.A.3 CCSS.HSF.IF.B.4 CCSS.HSF.IF.C.7 CCSS.HSF.BF.A.1.A CCSS.HSF.BF.A.1.B</p> | <p>Amortization</p> | <p>How can a spreadsheet be used to represent an amortization table?</p> | <p>Create an amortization table using recursive formulas Implement absolute references within recursive formulas Perform error analysis on amortization calculations Understand the impact of modifying monthly payments on a loan Use amortization tables to compare different loan products with different features Understand the impact of longer loan terms on total interest accrued on a loan</p> | <p>CALCULATE: Amortizing by Hand VIDEO: What is Amortization? VIDEO: Learn to Create an Amortization Spreadsheet ACTIVITY: Using an Amortization Table VIDEO: Learn How to Customize Your Amortization Spreadsheet Application</p> | <p>ngpf Student activity packet Videos Activity Application Textbook Section 7.3</p> | <p>Application</p> |
| <p>Credit Cards - 2 days</p> | <p>CCSS.PRACTICE.MP4 CCSS.HSA.SSE.A.1 CCSS.HSF.BF.A.1.A</p> | <p>Schumer box Minimum payments</p> | <p>What are the advantages and disadvantages to having and using a credit card?</p> | <p>Solve multi-step word problems Use a recursive sequence to model debt repayment Explain why a person may need or want a credit card Explain how a credit card works in terms of making purchases, calculating interest, and managing payments Read a Schumer box</p> | <p>Question of the Day VIDEO: Why Do We Use Credit Cards? VIDEO: Schumer Box ACTIVITY: FINE PRINT: Schumer Box ARTICLE: How Is Credit Card Interest Calculated? VIDEO: Credit Card Debt Explained ACTIVITY: MATH: The Cost of Minimum Payments</p> | <p>ngpf Student activity packet Videos Activities Article Textbook Section 3.5</p> | <p>Ticket-out</p> |
| <p>Review and assessment - 2 days</p> | <p>All of the above</p> | | <p>All of above</p> | <p>All of above</p> | | <p>Review/study guide Assessment</p> | <p>Assessment</p> |

Chapter total = 21 days

Cumulative total = 163 days

Title Financial Algebra - Applied and CP

Title Financial Algebra - Applied and CP

| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
|---|----------------------|----------------|---|--|--|-------------------------|-------------|
| EVERFI course: Cryptocurrency Foundations - 1 day | | | What is cryptocurrency? What can you do with cryptocurrency? What are the benefits and risks of cryptocurrencies? | Understand the basics of blockchain and the digital assets that are built upon it. Understand the history of cryptocurrency | Intro to Blockchain and Cryptocurrency Digital Assets: Cryptocurrency | EVERFI modules | |
| | | | | | | | |

| Unit: | Insurance and Probability | | | | | | |
|----------------------------------|---|----------------|---------------------|---|-------------------------|-------------------------|-------------|
| Big Ideas: | Understand the connection between insurances and probability. | | | | | | |
| Unit Essential Questions: | How is probability used to determine insurance premiums? | | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |

Units can be covered in any order.

Title Financial Algebra - Applied and CP

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|---|--|---|--|---|--|---|---|
| <p>Counting Principles - 3 days</p> | <p>CCSS.PRACTICE.MP2 CCSS.PRACTICE.MP5 CCSS.HSS.CP.B.9</p> | <p>Counting principle Permutation Combination</p> | <p>What is the difference between permutations and combinations?</p> | <p>Apply the Fundamental Counting Principle to calculate outcomes Evaluate factorial expressions Count using permutation and combination formulas Explain the criteria necessary to use each counting method</p> | <p>PROMPT: Count the Outcomes Learn it: Counting Methods 5-Point Practice: The Fundamental Counting Principle and Factorial Learn it Permutations and Combinations Practice it: Which Method Should You Use? Application</p> | <p>ngpf Student activity packet Application packet Textbook Section 9.2</p> | <p>5-point practice Application</p> |
| <p>Intro to Probability - 3 days</p> | <p>CCSS.HSF.IF.B.4 CCSS.HSF.IF.B.5 CCSS.PRACTICE.MP2 CCSS.PRACTICE.MP4</p> | <p>Probability Addition rule</p> | <p>What are the main concepts of probability?</p> | <p>Distinguish between theoretical and experimental probability Explain how the number of trials impacts the accuracy of a prediction Apply the addition rule Use the theoretical probability of an event to calculate its expected value Evaluate and compare strategies using expected values Use expected value to calculate the value of an insurance policy Analyze age as a factor that impacts auto insurance premiums</p> | <p>DESMOS: Chance Experiments VIDEO: Probability Part 1: Rules and Patterns Pick-2 Practice: Intro to Probability VIDEO: Probability Part 1: Rules and Patterns Pick-2 Practice: Addition Rule DESMOS: Prize Wheel Puzzle Learn it: Expected Value Application</p> | <p>ngpf Student activity packet Videos Desmos Application packet Textbook Section 4.4</p> | <p>Application</p> |
| <p>Intro to Insurance - 2 days</p> | <p>CCSS.PRACTICE.MP8</p> | <p>Premium Deductible Limit</p> | <p>How does probability relate to determining one's insurance premium?</p> | <p>Apply the Fundamental Counting Principle to calculate outcomes Understand how the insurance industry uses measures of risk and risk pooling to make money and pay out claims Explain the relationship between an insurance policy's premium and its deductible and coverage limits Determine what factors impact an insured person's premiums Deliberate on whether cell phone insurance is a smart financial decision</p> | <p>CONSIDER: Is AppleCare+ Worth Buying for Your iPhone? Learn it: EDPUZZLE: Intro to Insurance GRAPHS: Premiums, Deductibles, and Limits ACTIVITY: MOVE: What Determines Your Insurance Premium? MATH CONNECTION - COUNTING PRINCIPLES</p> | <p>ngpf Student activity packet Edpuzzle Activity Textbook Section 4.3</p> | <p>Ticket-out</p> |

Title Financial Algebra - Applied and CP

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|--|---|---|--|--|--|--|---|
| <p>Compound Probability - 3 days</p> | <p>CCSS.HSF.IF.B.4 CCSS.HSF.IF.B.5</p> | | <p>How is compound probability calculated?</p> | <p>Understand and apply set notation Differentiate between independent and dependent events Calculate the probability of independent events</p> | <p>VIDEO: The Last Banana: A Thought Experiment in Probability Learn it: Set Notation 5-Point Practice: Probability using Set Notation Learn it: Independent and Dependent Events DESMOS: Independent and Dependent Events Card Sort VIDEO: Probability of Independent Events VIDEO: Probability of Dependent Events Application</p> | <p>ngpf Student activity packet Desmos Videos Application packet Textbook Section 4.4</p> | <p>5-point practice Application</p> |
| <p>Review and assessment - 2 days</p> | <p>All of above</p> | | | <p>All of above</p> | | <p>Review/study guide Assessment</p> | <p>Assessment</p> |
| <p>Auto Insurance - 2 days</p> | <p>CCSS.HSS.MD.B.5 CCSS.HSS.MD.B.5.B CCSS.PRACTICE.MP4</p> | <p>Comprehensive Liability Collision Uninsured Underinsured</p> | <p>What factors contribute to one's auto insurance premium?</p> | <p>Use the theoretical probability of an event to calculate its expected value Evaluate and compare insurance policies using expected values List factors that determine auto insurance premiums Describe the main types of auto insurance policies and compare state requirements Explain a deductible, out-of-pocket expenses, and what insurance will pay for in different situations Choose an appropriate level of car insurance coverage</p> | <p>Question of the day EDPUZZLE: 5 Factors That Affect What You Pay for Auto Insurance ACTIVITY: PLAY: Types of Car Insurance INFOGRAPHIC: Deductibles and Coverage Limits MATH CONNECTION - EXPECTED VALUE ARTICLE: Minimum Car Insurance Requirements by State</p> | <p>ngpf Student activity packet EdPuzzle Activity Math Connection Textbook Section 4.3</p> | <p>Ticket-out</p> |
| <p>Conditional Probability - 3 days</p> | <p>CCSS.PRACTICE.MP.6 CCSS.HSS.CP.A.1 CCSS.HSS.CP.A.3 CCSS.HSS.CP.A.4 CCSS.HSS.CP.A.5 CCSS.HSS.CP.B.6 CCSS.HSS.MD.B.7</p> | <p>Conditional probability Venn diagram</p> | <p>What is conditional probability and how is it calculated?</p> | <p>Define conditional probability and use it to compare relative likelihood of different outcomes Apply conditional probability to data in a table Use Venn diagrams to understand conditional probability visually Investigate the occurrence of false positives and false negatives Calculate expected costs due to unpredictable weather or medical events Compare access to insurance for workers in different industries, job types, and age groups</p> | <p>ANALYZE: What Are the Chances? Learn it: Conditional Probabilities for Related Events 5-POINT PRACTICE: Conditional Probabilities Learn it: Conditional Probability and Tables ANALYZE: Solving the Monty Hall Problem Application</p> | <p>ngpf Student activity packet Textbook Section 4.4</p> | <p>5-point practice Application</p> |

Units can be covered in any order.

Title Financial Algebra - Applied and CP

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|--|---|---|---|--|---|---|------------|
| | | | | Use conditional probability to make informed choices given limited information | | | |
| Health Insurance - 2 days | CCSS.PRACTICE.MP4 CCSS.HSS.CP.A.2 CCSS.HSS.CP.A.3 CCSS.HSS.CP.B.9 CCSS.HSS.MD.B.5 | HSA FSA HRA | Why is it important to have health insurance and what are options available for it? | Use compound probability to find likelihood of medical claim outcomes Use expected value of compound events to evaluate health insurance decisions Explore the binomial distribution for repeated sampling of events Compare the costs and benefits of insurance for young, healthy individuals Understand insurance as a risk transfer Understand the different financial responsibilities of the individual and an insurer in healthcare plans Examine the different places where individuals typically obtain insurance Evaluate and compare different health insurance plans Understand the availability of preventive care treatments | Question of the day EDPUZZLE: I'm Young & Healthy, Can I Skip Health Insurance? VIDEO: Understanding Your Health Insurance Costs ACTIVITY: COMPARE: Types of Health Insurance Plans ARTICLE: Summary of Preventive Care Services VIDEO: Health Care Hacks: HSA vs. FSA vs. HRA ANALYZE: How Much Will You Save? | ngpf Student activity packet Edpuzzle Videos Article | Ticket-out |
| Other Types of Insurance - 2 days | CCSS.HSS.IC.B.3 CCSS.HSS.MD.B.5 CCSS.PRACTICE.MP3 | Renters insurance Disability insurance | What are other types of insurance that one should consider having? | Calculate expected value Make inferences and check the reasonableness of the outcomes Explain how renters insurance works and how the cost of premiums compare to those of homeowners insurance Decide if long- and/or short-term disability policies are a good financial decision Consider the usefulness of an umbrella policy for additional liability coverage | ACTIVITY: INTERACTIVE: Bummer! EDPUZZLE: Insurance 101 - Renters Insurance ACTIVITY: DATA CRUNCH: How Do Renters and Homeowners Insurance Compare? VIDEO: Why You Should Pay for Disability Insurance INFOGRAPHIC: Top Causes of Short-Term Disability Claims MATH CONNECTION - EXPECTED VALUE | ngpf Student activity packet Edpuzzle Video Textbook Section 10.4 | Ticket-out |
| Review and assessment - 2 days | All of above | | | All of above | | Review/study guide Assessment | Assessment |

Title Financial Algebra - Applied and CP

| Unit: | | Budgeting and Systems of Inequalities | | | | | |
|--|---|---|--|--|---|--|--------------------|
| Big Ideas: | | Create a budget plan that is appropriate and obtainable. | | | | | |
| Unit Essential Questions: | | Why is it important for anyone, at any age, to budget? What are tools that can be used to help with the budgeting process? | | | | | |
| Concept & Pacing | Common Core Standard | Key Vocabulary | Essential Questions | Competencies (skills, knowledge, abilities) | Mini-Lessons/Activities | Instructional Materials | Assessments |
| Budgeting for Teens - 2 days | CCSS.PRACTICE.M P4 CCSS.HSF.IF.C.7.A CCSS.HSF.BF.A.1 CCSS.HSF.LE.B.5 CCSS.HSM | | How can budgets be created? How should needs vs wants be prioritized? | Write and graph linear equations and determine if a given point is a possible solution Calculate percentages Create a mathematical model in the form of a budget Differentiate between income and expenses and explain how they're used to create a budget Consider needs versus wants when deciding how to spend money Build a basic budget with constant or variable income | Graph: Median American Household Spending Learn it: Video: Budgeting for Teens Activity: Is it a need or a want? Math Connection: Graphing Equations Learn It: Video or Article: How to build a budget if you don't have a steady income Practice It | ngpf Student activity packet Article Video Textbook Section 11.3 | Ticket-out |
| Graphing Linear Inequalities - 3 days | CCSS.PRACTICE.M P3 CCSS.PRACTICE.M P4 CCSS.HSA.REI.D.12 CCSS.HSA.CED.A.3 | Inequality | How can linear inequalities be used to represent real-world concepts? | Graph linear inequalities and identify solutions. Write linear inequalities from word problems. Interpret solutions to inequalities in terms of a real-world context. Model budgeting constraints based on two sources of income. | Interactive: The Uber Game Explore It: Linear Inequalities Learn It: Graphing Linear Inequalities Additional Practice Practice It: Desmos - Point Collector Lines Learn It: Contextualizing Linear Inequalities Practice It: Desmos Application | ngpf Student activity packet Desmos activities Application packet | Desmos Application |
| Budgeting Strategies - 2 days | CCSS.PRACTICE.M P4 CCSS.HSM | | Why is it important for teens to budget and how can they do so? | Correctly use arithmetic with decimals and percents Create a mathematical model in the form of a budget Appreciate the importance of creating a budget Identify features and limitations of three different budgeting strategies Create a budget given imperfect information | Compare: Gross vs Net Pay Learn It: Article: Reasons why you should budget your money Video: Zero Based Budgeting Video: How to budget money as a teen Video: Building a budget Math Connection: Modeling | ngpf Student activity packet Videos Textbook Section 11.4 | Ticket-out |

Units can be covered in any order.

Title Financial Algebra - Applied and CP

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| <p>Budgeting Tools - 2 days</p> | <p>CCSS.PRACTICE.M P4 CCSS.HSA.CED.A.1 CCSS.7.EE.B.4</p> | | <p>How can technology, such as apps and sheets, help us to budget?</p> | <p>Write equations that represent real life scenarios Explore different budgeting apps Create your own budget using a spreadsheet</p> | <p>Question of the Day: What are the top 3 categories that Gen Z spend money on? Article: The 6 Best Budgeting Apps Practice It: Writing Equations Video: Creating a Budget in Google Sheets Activity: Comparing Budgets Application</p> | <p>ngpf Student activity packet Article Video Application packet Textbook Section 11.4 and 11.5</p> | <p>Application</p> |
| <p>Graphing a System of Inequalities - 3 days</p> | <p>CCSS.PRACTICE.M P1 CCSS.HSA.REI.D.12 CCSS.HSF.LE.B.5</p> | | <p>How can systems of inequalities be represented graphically?</p> | <p>Graph systems of linear inequalities State solutions to the system using the solution region on the graph Understand special cases of systems of linear inequalities Work with a budget given restraints</p> | <p>Intro: How many hours should Ben work? Learn it: What is a system of inequalities? Practice It Systems of Inequalities Applications Application</p> | <p>ngpf Student activity packet Application packet</p> | <p>Application</p> |
| <p>Chapter Review and Assessment - 2 days</p> | <p>All of above</p> | | <p>All of above</p> | <p>All of above</p> | | <p>Review/Study Guide Assessment</p> | <p>Chapter Test</p> |
| <p>Budgeting for Fixed Costs - 2 days</p> | <p>CCSS.PRACTICE.M P1 CCSS.HSA.REI.D.12 CCSS.HSA.CED.A.3</p> | <p>Fixed costs</p> | <p>How can inequalities be used to represent budgeting concepts? How can budgets be created for fixed costs?</p> | <p>Represent constraints by equations or inequalities Understand how changing parameters alters inequalities with two variables Understand factors that affect net worth Differentiate between fixed/variable expenses and needs/wants Consider common fixed costs and explore various ways to reduce them Specifically assess housing costs and how to reduce them Identify government aid programs to assist with expenses</p> | <p>Data Crunch: How much income do you need to be rich? Video: What is wealth? Activity: Move: Organize Budget Expenses Article: How to reduce housing costs: 23 ways to lower housing expenses Article: Top 10 ways to reduce your fixed expenses Infographic: Government expenses Math Connection: Percent and Inequalities</p> | <p>ngpf Student activity packet Video Articles Textbook Section 11.1 and 11.2</p> | <p>Ticket-out</p> |

Title Financial Algebra - Applied and CP

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|---|---|----------------|---|--|--|---|--------------|
| Budgeting for Variable Costs - 2 days | CCSS.PRACTICE.M P4 CCSS.HSA.CED.A.3 | Variable costs | How can inequalities be used to represent budgeting concepts? How can budgets be created for variable costs? | Analyze real-life constraints using systems of inequalities Identify and contextualize solutions to a system of inequalities Analyze strategies for budgeting variable expenses Describe common costs associated with car ownership Summarize strategies for reducing everyday spending on significant variable costs, including transportation and food. | Activity: Play Budget Frenzy Infographic: Consumer Spending in the United States Article: Make Sure Variable Expenses Don't Derail Your Budget With These 4 Tips Graph: Cars Still Dominate the American Commute Video: What are the True Costs of Car Ownership? Article: How to Figure Out Your Monthly Food Budget Video: How to Save Money on Everyday Expenses Math Connection: Representing Constraints with Inequalities | ngpf Student activity packet Articles Videos Textbook Section 11.1 and 11.2 | Ticket-out |
| Constraints and Optimization - 3 days | CCSS.PRACTICE.M P3 CCSS.PRACTICE.M P4 CCSS.HSA.REI.D.12 CCSS.HSA.CED.A.3 | | How can inequalities be used to represent budgeting concepts? | Represent constraints by equations or inequalities Graph the solutions to a linear inequality in two variables with multiple constraints Solve a system of inequalities graphically Find an optimal solution to a system of inequalities built from realistic constraints Understand how constraints play a role in business Apply logical principles to make optimal decisions | Analyze: Find a Common Solutions Learn It: Graphing Complex Constraints Practice It: Constraints with Varying Slopes Learn It: Optimization Application | ngpf Student activity packet Application packet | Application |
| Complete a Budget - 2 days | CCSS.HSF.IF.B.4 CCSS.HSF.IF.B.5 | | How can a budget be created using averages? | Calculate averages Differentiate between salary and wage work Create and analyze a zero-based budget using a spreadsheet | Discussion prompt: Would you rather... Article: Salary vs Hourly Pay: What are the differences? Article: 8 tips for budgeting when you earn an hourly wage Activity: Building a Budget | ngpf Student activity packet Articles Textbook Section 11.3 | Ticket-out |
| Chapter Review and Assessment - 2 days | All of above | | All of above | All of above | | Review/Study Guide Assessment | Chapter Test |

Cumulative total:

Units can be covered in any order.