Algebra 1, 4th Edition • Lesson Plan Overview

Chapter 1: Expressions

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| Pages | Objectives | Resources | Assessments |
| 1.1 Adding & Subtracting Rational Numbers | | | |
| 4–9 | 1.1.1 Add rational numbers.  1.1.2 Identify the properties of addition.  1.1.3 Subtract rational numbers by adding the opposite.  1.1.4 Evaluate sums and differences to solve real-world problems.  1.1.5 Explain the unity and diversity of rational numbers.  BWS Foundations (explain) | BJU Press Trove\*   * Video: Understanding the World * PowerPoint presentation   AfterSchoolHelp.com   * Adding & Subtracting Rational Numbers | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 4) |
| 1.2 Multiplying & Dividing Rational Numbers | | | |
| 10–17 | 1.2.1 Multiply rational numbers.  1.2.2 Divide rational numbers by multiplying by the reciprocal.  1.2.3 Identify the properties of multiplication.  1.2.4 Evaluate products and quotients to solve real-world problems. | Activities   * Operations with Rational Numbers   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Multiplying & Dividing Rational Numbers | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 10) |
| 1.3 Exponents & Roots | | | |
| 18–22 | 1.3.1 Define exponent, base, exponential form, square root, and cube root.  1.3.2 Simplify expressions with integral exponents by using the properties of exponents.  1.3.3 Evaluate the square root and cube root of a number. | Activities   * Exponents & Roots   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Exponents & Roots | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 18)   Assessments   * Quiz 1A (Sections 1.1–1.3) |

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| Pages | Objectives | Resources | Assessments |
| 1.4 Order of Operations | | | |
| 23–28 | 1.4.1 State the order of operations.  1.4.2 Evaluate numerical expressions by using the order of operations.  1.4.3 Translate word phrases into numerical expressions. | Activities   * Order of Operations * Using Technology—Introduction to the TI-84 Plus   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Order of Operations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 23) |
| 1.5 Variables & Algebraic Expressions | | | |
| 29–34 | 1.5.1 Evaluate an algebraic expression with given variable values.  1.5.2 Translate word phrases into algebraic expressions.  1.5.3 Apply formulas to solve real-world problems.  1.5.4 Explain how a biblical view of creation accounts for the effectiveness of mathematics.  BWS Foundations (explain) | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Variables & Algebraic Expressions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 29) |
| 1.6 Using the Distributive Property | | | |
| 35–38 | 1.6.1 Apply the Distributive Property to simplify algebraic expressions. | Activities   * Algebraic Expressions & Translation   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Using the Distributive Property | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 35)   Assessments   * Quiz 1B (Sections 1.4–1.6) |
| Application Problems—Energy Costs | | | |
| 39–40 | 1.AP.1 Calculate values related to the cost of energy. | BJU Press Trove   * Video: Energy Costs | Student Edition   * Exercises |

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| Pages | Objectives | Resources | Assessments |
| Chapter 1 Review | | | |
| 41–43 | Review the skills and concepts taught in Chapter 1. | Activities   * Chapter 1 Review * Cumulative Review 1   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 1 Review exercises |
| Chapter 1 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 1. |  | Assessments   * Chapter 1 Test   BJU Press Trove   * ExamView: Chapter 1 test bank |

Chapter 2: Solving Equations

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| Pages | Objectives | Resources | Assessments |
| 2.1 Simple Equations | | | |
| 46–53 | 2.1.1 Identify the properties of equality.  2.1.2 Apply the properties of equality to solve one-step equations and two-step equations in the form  ax + b = c.  2.1.3 Solve real-world problems by writing and solving simple linear equations. | Activities   * Math History—Al-Khwarizmi * Equations 1   BJU Press Trove\*   * Video: Answering Moral Questions * PowerPoint presentation   AfterSchoolHelp.com   * Simple Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 46) |
| 2.2 Multistep Equations (2 days) | | | |
| 54–59 | 2.2.1 Apply mathematical properties to solve multistep equations.  2.2.2 Apply mathematical properties to solve equations with variables on both sides of the equals sign.  2.2.3 Solve real-world problems by writing and solving multistep equations. | Activities   * Using Technology—Editing * Equations 2   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Multistep Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 54)   Assessments   * Quiz 2A (Sections 2.1–2.2) |
| 2.3 Literal Equations (2 days) | | | |
| 60–64 | 2.3.1 Solve literal equations for the indicated variable.  2.3.2 Find an unknown quantity within a real-world context by evaluating a solved literal equation.  2.3.3 Explain what makes a mathematical model useful.  BWS Modeling (explain) | Activities   * Literal Equations   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Literal Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 60) |
| 2.4 Ratios & Proportions (2 days) | | | |
| 65–72 | 2.4.1 Convert given rates into equivalent rates.  2.4.2 Solve proportions.  2.4.3 Use proportions to solve  real-world problems.  2.4.4 Find corresponding lengths and areas of similar figures. | Activities   * Unit Prices & Best Buys * Scales for Maps & Drawings   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Ratios & Proportions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 65) |

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| Pages | Objectives | Resources | Assessments |
| 2.5 Percent Equations (2 days) | | | |
| 73–79 | 2.5.1 Apply the percent formula to find the part, the percent, or the whole.  2.5.2 Solve real-world problems using the percent formula.  2.5.3 Find the percent change when a quantity increases or decreases. | Activities   * Ratios, Rates, Proportions & Percents   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Percent Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 73)   Assessments   * Quiz 2B (Sections 2.3–2.5) |
| 2.6 Money Problems (2 days) | | | |
| 80–87 | 2.6.1 Apply percent equations to solve real-world problems involving tips, commission, markups, and discounts.  2.6.2 Solve real-world problems involving simple interest.  2.6.3 Explain the limitations of mathematical models in making decisions.  BWS Modeling (explain)  2.6.4 Compare the benefits and limitations of mathematical models.  BWS Modeling (evaluate) | Activities   * Using Technology—Math & Catalog Menus   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Money Problems | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 80) |
| 2.7 Motion Problems (2 days) | | | |
| 88–94 | 2.7.1 Solve real-world problems about related distances by using d = rt. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Motion Problems | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 88) |
| 2.8 Mixture Problems (2 days) | | | |
| 95–102 | 2.8.1 Solve real-world problems involving mixtures. | Activities   * Applied Problems   BJU Press Trove   * Video: Mixture Problems * PowerPoint presentation   AfterSchoolHelp.com   * Mixture Problems | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 95)   Assessments   * Quiz 2C (Sections 2.6–2.8) |

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| Pages | Objectives | Resources | Assessments |
| Application Problems—Transportation Costs (2 days) | | | |
| 103–4 | 2.AP.1 Calculate values related to the cost of transportation. | BJU Press Trove   * Video: Transportation Costs | Student Edition   * Exercises |
| Chapter 2 Review | | | |
| 105–9 | Review the skills and concepts taught in Chapter 2. | Activities   * Chapter 2 Review * Cumulative Review 2   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 2 Review exercises |
| Chapter 2 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 2. |  | Assessments   * Chapter 2 Test   BJU Press Trove   * ExamView: Chapter 2 test bank |

Chapter 3: Solving Inequalities

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| Pages | Objectives | Resources | Assessments |
| 3.1 Simple Inequalities | | | |
| 112–18 | 3.1.1 Solve simple linear inequalities by applying the properties of inequality.  3.1.2 Interpret negated inequalities by using the Trichotomy Property.  3.1.3 Solve real-world problems by writing and solving simple linear inequalities.  3.1.4 Explain why valid reasoning is important in solving inequalities.  BWS Reasoning (explain) | Activities   * Properties of Inequality   BJU Press Trove\*   * Video: Valid Reasoning * PowerPoint presentation   AfterSchoolHelp.com   * Simple Inequalities | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 112) |
| 3.2 Multistep Inequalities | | | |
| 119–22 | 3.2.1 Simplify inequalities by applying the Distributive Property.  3.2.2 Solve inequalities containing variables on both sides.  3.2.3 Solve real-world problems by writing and solving multistep inequalities. | Activities   * Solving Inequalities   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Multistep Inequalities | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 119)   Assessments   * Quiz 3A (Sections 3.1–3.2) |
| 3.3 Conjunctions (2 days) | | | |
| 123–28 | 3.3.1 Define a conjunction.  3.3.2 Solve conjunctions.  3.3.3 Write conjunctions that model real-world applications. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Conjunctions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 123) |
| 3.4 Disjunctions | | | |
| 129–34 | 3.4.1 Define a disjunction.  3.4.2 Solve disjunctions.  3.4.3 Write disjunctions that model real-world situations. | Activities   * Compound Inequalities   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Disjunctions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 129)   Assessments   * Quiz 3B (Sections 3.3–3.4) |

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| Pages | Objectives | Resources | Assessments |
| 3.5 Absolute Value Equations | | | |
| 135–39 | 3.5.1 Define an absolute value equation.  3.5.2 Write a disjunction representing an absolute value equation.  3.5.3 Solve absolute value equations. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Absolute Value Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 135) |
| 3.6 Absolute Value Inequalities (2 days) | | | |
| 140–45 | 3.6.1 Write a conjunction or disjunction representing an absolute value inequality.  3.6.2 Solve absolute value inequalities.  3.6.3 Solve real-world problems by writing and solving absolute value inequalities.  3.6.4 Evaluate the limitations of deductive reasoning in determining truth.  BWS Reasoning (evaluate) | Activities   * Absolute Value Equations & Inequalities * Using Technology—Graphing Inequalities   BJU Press Trove   * Video: Absolute Value Inequalities * PowerPoint presentation   AfterSchoolHelp.com   * Absolute Value Inequalities | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 140)   Assessments   * Quiz 3C (Sections 3.5–3.6) |
| Application Problems—Calculating Interest | | | |
| 146–47 | 3.AP.1 Calculate values related to interest. | BJU Press Trove   * Video: Calculating Interest | Student Edition   * Exercises |
| Chapter 3 Review | | | |
| 148–51 | Review the skills and concepts taught in Chapter 3. | Activities   * Chapter 3 Review * Cumulative Review 3   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 3 Review exercises |
| Chapter 3 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 3. |  | Assessments   * Chapter 3 Test   BJU Press Trove   * ExamView: Chapter 3 test bank |

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| Pages | Objectives | Resources | Assessments |
| First Quarter Review & Exam (3 days) | | | |
|  | Review and demonstrate mastery of the skills and concepts taught in Chapters 1–3. |  | Assessments   * Exam 1   BJU Press Trove   * ExamView: Chapters 1–3 test banks |

Chapter 4: Functions

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| Pages | Objectives | Resources | Assessments |
| 4.1 Relations & Functions | | | |
| 154–60 | 4.1.1 Represent relations and functions by using sets of ordered pairs, tables, mapping diagrams, and graphs.  4.1.2 Identify the domain and range of relations and functions.  4.1.3 Determine whether a relation is a function. | BJU Press Trove\*   * Video: Design in the World * PowerPoint presentation   AfterSchoolHelp.com   * Relations & Functions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 154) |
| 4.2 Graphs of Relations & Functions | | | |
| 161–68 | 4.2.1 Determine the domain and range of a relation by using graphed points.  4.2.2 Determine whether graphed points represent a function.  4.2.3 Graph relations and functions. | Activities   * Relations & Functions   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Graphs of Relations & Functions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 161) |
| 4.3 Using Graphs | | | |
| 169–76 | 4.3.1 Draw graphs to model real-world data.  4.3.2 Interpret graphs representing real-world situations. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Using Graphs | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 169)   Assessments   * Quiz 4A (Sections 4.1–4.3) |
| 4.4 Function Rules (2 days) | | | |
| 177–84 | 4.4.1 Create sets of ordered pairs, tables, graphs, or mapping diagrams by using given function rules.  4.4.2 Write function rules by using sets of ordered pairs, tables, graphs, or mapping diagrams.  4.4.3 Use function rules to model real-world situations.  4.4.4 Explain how mathematics helps us see design in creation.  BWS Design (explain) | Activities   * Writing Function Rules   BJU Press Trove   * Video: Writing Function Rules * PowerPoint presentation   AfterSchoolHelp.com   * Function Rules | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 177) |

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| Pages | Objectives | Resources | Assessments |
| 4.5 Arithmetic Sequences | | | |
| 185–91 | 4.5.1 Define an arithmetic sequence.  4.5.2 Find missing terms in a sequence by determining the sequence’s pattern.  4.5.3 Describe arithmetic sequences with multiple representations.  4.5.4 Solve real-world problems involving arithmetic sequences. | Activities   * Arithmetic Sequences   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Arithmetic Sequences | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 185)   Assessments   * Quiz 4B (Sections 4.4–4.5) |
| 4.6 Direct & Inverse Variations (2 days) | | | |
| 192–99 | 4.6.1 Classify a function as a direct variation, inverse variation, or neither.  4.6.2 Find the constant of variation for direct and inverse variations.  4.6.3 Write functions modeling direct and inverse variations to solve real-world problems.  4.6.4 Explain the significance of recognizing design in nature.  BWS Design (explain) | Activities   * Direct & Inverse Variation Sudoku   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Direct & Inverse Variations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 193) |
| 4.7 Graphing Absolute Value Functions (2 days) | | | |
| 200–207 | 4.7.1 Create sets of ordered pairs, tables, and graphs representing absolute value functions.  4.7.2 Describe translations of the basic absolute value function  y = |x|.  4.7.3 Write a function rule for the graph of an absolute value function. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Graphing Absolute Value Functions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 200)   Assessments   * Quiz 4C (Sections 4.6–4.7) |
| Application Problems—Fractals (2 days) | | | |
| 208–10 | 4.AP.1 Perform mathematical analyses of fractals. | Activities   * Constructing a 3D Fractal   BJU Press Trove   * Video: Fractals | Student Edition   * Exercises |

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| Pages | Objectives | Resources | Assessments |
| Chapter 4 Review | | | |
| 211–15 | Review the skills and concepts taught in Chapter 4. | Activities   * Chapter 4 Review * Cumulative Review 4   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 4 Review exercises |
| Chapter 4 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 4. |  | Assessments   * Chapter 4 Test   BJU Press Trove   * ExamView: Chapter 4 test bank |

Chapter 5: Linear Functions

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| Pages | Objectives | Resources | Assessments |
| 5.1 Graphing Lines | | | |
| 218–23 | 5.1.1 Graph linear equations on the co­ordinate plane by using ordered pairs.  5.1.2 Convert equations of lines between standard form and function form.  5.1.3 Graph a linear equation by using the x- and y-intercepts. | BJU Press Trove\*   * Video: Validating Models * PowerPoint presentation   AfterSchoolHelp.com   * Graphing Lines | **Student Edition**   * Skill Checks * Exercises   **Teacher Edition**   * Bell ringer (p. 218) |
| 5.2 Slope | | | |
| 224–30 | 5.2.1 Determine the slope of a line from a graph.  5.2.2 Find the slope of a line passing through 2 given points.  5.2.3 Apply slope in a real-world context.   BWS Modeling (explain) | **BJU Press Trove**   * PowerPoint presentation   **AfterSchoolHelp.com**   * Slope | **Student Edition**   * Skill Checks * Exercises   **Teacher Edition**   * Bell ringer (p. 224)   **Assessments**   * Quiz 5A (Sections 5.1–5.2) |
| 5.3 Slope-Intercept Form | | | |
| 231–35 | 5.3.1 Identify the slope and y-intercept of a linear equation.  5.3.2 Model linear equations in slope-intercept form.  5.3.3 Model real-world situations by using linear equations in slope-intercept form. | **Activities**   * Graphs of Lines * Direct Variation & Linear Equations   **BJU Press Trove**   * PowerPoint presentation   **AfterSchoolHelp.com**   * Slope-Intercept Form | **Student Edition**   * Skill Checks * Exercises   **Teacher Edition**   * Bell ringer (p. 231) |
| 5.4 Writing Linear Equations (2 days) | | | |
| 236–42 | 5.4.1 Write the equation of a line by using its slope and a point on the line.  5.4.2 Write the equation of a line by using the point-slope form.  5.4.3 Write the equation of a line given its graph.  5.4.4 Model real-world situations by using linear equations.  5.4.5 Explain why it is important to check the accuracy of a model.   BWS Modeling (explain) | **Activities**   * Forms of Linear Equations   **BJU Press Trove**   * PowerPoint presentation   **AfterSchoolHelp.com**   * Writing Linear Equations | **Student Edition**   * Skill Checks * Exercises   **Teacher Edition**   * Bell ringer (p. 236)   **Assessments**   * Quiz 5B (Sections 5.3–5.4) |

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| Pages | Objectives | Resources | Assessments |
| 5.5 Parallel & Perpendicular Lines | | | |
| 243–47 | 5.5.1 Classify a pair of equations as parallel, perpendicular, or neither.  5.5.2 Write equations of parallel and perpendicular lines. | **BJU Press Trove**   * Video: Parallel versus Perpendicular * PowerPoint presentation   **AfterSchoolHelp.com**   * Parallel & Perpendicular Lines | **Student Edition**   * Skill Checks * Exercises   **Teacher Edition**   * Bell ringer (p. 243) |
| 5.6 Trend Lines & Correlation (2 days) | | | |
| 248–54 | 5.6.1 Graph a trend line from a given scatter plot.  5.6.2 Make interpolations or extrapolations of the data using a trend line.  5.6.3 Describe the linear correlation of a given data set.  5.6.4 Determine the line of best fit from real-world data. | **Activities**   * Using Technology—Regression Lines * Using Correlation & Lines of Best Fit   **BJU Press Trove**   * Video: Trend Lines * PowerPoint presentation   **AfterSchoolHelp.com**   * Trend Lines & Correlation | **Student Edition**   * Skill Checks * Exercises   **Teacher Edition**   * Bell ringer (p. 248–49)   **Assessments**   * Quiz 5C (Sections 5.5–5.6) |
| Application Problems—Safe Slopes | | | |
| 255–56 | 5.AP.1 Calculate values related to slopes in construction.  5.AP.2 Recognize connections between slopes and safety. | BJU Press Trove   * Video: Safe Slopes | Student Edition   * Exercises |
| Chapter 5 Review | | | |
| 257–60 | Review the skills and concepts taught in Chapter 5. | Activities   * Chapter 5 Review * Cumulative Review 5   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 5 Review exercises |
| Chapter 5 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 5. |  | Assessments   * Chapter 5 Test   BJU Press Trove   * ExamView: Chapter 5 test bank |

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| Pages | Objectives | Resources | Assessments |
| STEM Project—The Water Wheel | | | |
| 261 | S.1.1 Design a water wheel by using the engineering design process.  S.1.2 Research the materials and design for a water-propelled wheel.  S.1.3 Assemble a water wheel capable of lifting weights.  S.1.4 Optimize the efficiency of the wheel by evaluating and modifying the design.  S.1.5 Describe how work and power are related to each other. | Activities   * STEM—The Water Wheel | Activities   * STEM—The Water Wheel project grading rubric |

Chapter 6: Linear Systems

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| Pages | Objectives | Resources | Assessments |
| 6.1 Solving Systems by Graphing | | | |
| 264–71 | 6.1.1 Solve systems of linear equations by graphing.  6.1.2 Describe the 3 possible types of solutions for a system of 2 linear equations.  6.1.3 Solve real-world problems by writing and graphing a system of linear equations.  6.1.4 Explain why the intersection of 2 distinct lines is exactly 1 point.  BWS Reasoning (explain) | Activities   * Graphing Systems * Breaking Even   BJU Press Trove\*   * Video: Human Reasoning * PowerPoint presentation   AfterSchoolHelp.com   * Solving Systems by Graphing | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 265) |
| 6.2 Solving Systems by Substitution (2 days) | | | |
| 272–78 | 6.2.1 Solve systems of linear equations by substitution.  6.2.2 Solve real-world problems by writing and solving a system of linear equations. | Activities   * Solving Systems by Substitution   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Solving Systems by Substitution | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 272)   Assessments   * Quiz 6A (Sections 6.1–6.2) |
| 6.3 Solving Systems by Elimination | | | |
| 279–84 | 6.3.1 Solve systems of linear equations by elimination.  6.3.2 Solve real-world problems by writing and solving a system of linear equations. | Activities   * Solving Systems by Elimination * Math History—Zhu Shijie   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Solving Systems by Elimination | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 279) |

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| Pages | Objectives | Resources | Assessments |
| 6.4 Special Systems (2 days) | | | |
| 285–93 | 6.4.1 Solve a given linear system by using an appropriate method.  6.4.2 Classify linear systems as consistent independent, consistent dependent, or inconsistent.  6.4.3 Relate the slopes and y-intercepts of lines in each type of linear system.  6.4.4 Explain 2 assumptions necessary for this classification of linear systems.  BWS Reasoning (explain) | Activities   * 3-Dimensional Systems   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Special Systems | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 285)   Assessments   * Quiz 6B (Sections 6.3–6.4) |
| 6.5 Motion Problems (2 days) | | | |
| 294–300 | 6.5.1 Solve real-world motion problems by using systems of linear equations. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Motion Problems | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 294) |
| 6.6 Mixture Problems (2 days) | | | |
| 301–6 | 6.6.1 Solve real-world mixture problems by using a system of linear equations. | Activities   * Word Problems   BJU Press Trove   * Video: Writing Mixture Problems * PowerPoint presentation   AfterSchoolHelp.com   * Mixture Problems | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 301)   Assessments   * Quiz 6C (Sections 6.5–6.6) |
| 6.7 Graphing Linear Inequalities (2 days) | | | |
| 307–13 | 6.7.1 Determine whether a point is a solution to a linear inequality.  6.7.2 Graph linear inequalities.  6.7.3 Model real-world situations with linear inequalities. | Activities   * Linear Equations & Inequalities   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Graphing Linear Inequalities | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 307) |

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| Pages | Objectives | Resources | Assessments |
| 6.8 Solving Systems of Inequalities (2 days) | | | |
| 314–20 | 6.8.1 Solve systems of inequalities by graphing.  6.8.2 Solve real-world problems by graphing systems of inequalities. | Activities   * Using Technology—Graphing Systems of Linear Inequalities   BJU Press Trove   * Video: Systems of Inequalities * PowerPoint presentation   AfterSchoolHelp.com   * Solving Systems of Inequalities | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 314)   Assessments   * Quiz 6D (Sections 6.7–6.8) |
| Application Problems—Historias de la Biblia | | | |
| 321–22 | 6.AP.1 Apply concepts learned in Chapter 6 to ministry. | BJU Press Trove   * Video: Spread Good News | Student Edition   * Exercises |
| Chapter 6 Review | | | |
| 323–27 | Review the skills and concepts taught in Chapter 6. | Activities   * Chapter 6 Review * Cumulative Review 6   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 6 Review exercises |
| Chapter 6 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 6. |  | Assessments   * Chapter 6 Test   BJU Press Trove   * ExamView: Chapter 6 test bank |
| Second Quarter Review & Exam (3 days) | | | |
|  | Review and demonstrate mastery of the skills and concepts taught in Chapters 4–6. |  | Assessments   * Exam 2   BJU Press Trove   * ExamView: Chapters 4–6 test banks |

Chapter 7: Exponents

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| Pages | Objectives | Resources | Assessments |
| 7.1 Properties of Exponents (2 days) | | | |
| 330–36 | 7.1.1 Apply product, power, and quotient properties of exponents to simplify algebraic expressions.  7.1.2 Simplify powers containing a 0 or negative exponent.  7.1.3 Simplify algebraic expressions containing integral exponents and multiple terms. | Activities   * The Binary Number System   BJU Press Trove\*   * Video: Morality and Ethics * PowerPoint presentation   AfterSchoolHelp.com   * Properties of Exponents | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 330) |
| 7.2 Scientific Notation | | | |
| 337–43 | 7.2.1 Convert numbers between standard and scientific notation.  7.2.2 Apply properties of exponents to evaluate products, powers, quotients, sums, and differences of numbers in scientific notation.  7.2.3 Solve real-world problems using scientific notation.  7.2.4 Explain why it is tempting to view math as amoral.   BWS Ethics (explain) | Activities   * Scientific Notation * Large Numbers   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Scientific Notation | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 337)   Assessments   * Quiz 7A (Sections 7.1–7.2) |
| 7.3 Power Functions (2 days) | | | |
| 344–50 | 7.3.1 Identify the shape of the parent power functions y = x2 and y = x3 by plotting points.  7.3.2 Describe translations of power functions.  7.3.3 Graph translations of power functions by identifying the vertex or point of inflection.  7.3.4 Write basic power function rules from descriptions or graphs. | Activities   * Translating Power Functions   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Power Functions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 344) |

\*Digital resources for homeschool users are available on Homeschool Hub.

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| Pages | Objectives | Resources | Assessments |
| 7.4 Exponential Functions | | | |
| 351–57 | 7.4.1 Define exponential functions.  7.4.2 Graph exponential functions by plotting ordered pairs.  7.4.3 Solve real-world problems using exponential functions.  7.4.4 Explain how math can be used in an unethical way.   BWS Ethics (explain) | Activities   * Using Technology—Families of Functions * Exponential Functions   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Exponential Functions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 351)   Assessments   * Quiz 7B (Sections 7.3–7.4) |
| 7.5 Exponential Growth & Decay (2 days) | | | |
| 358–64 | 7.5.1 Classify exponential functions as exhibiting exponential growth or decay.  7.5.2 Describe characteristics of an exponential growth or decay function.  7.5.3 Write functions modeling real-world exponential growth and decay.  7.5.4 Solve compound interest problems. | Activities   * Exponential Decay   BJU Press Trove   * Video: Exponential Growth and Decay * PowerPoint presentation   AfterSchoolHelp.com   * Exponential Growth & Decay | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 358) |
| 7.6 Geometric Sequences | | | |
| 365–70 | 7.6.1 Define a geometric sequence.  7.6.2 Find missing terms in a geometric sequence by determining the sequence’s pattern.  7.6.3 Describe geometric sequences with multiple representations.  7.6.4 Solve real-world problems involving geometric sequences. | Activities   * Geometric Sequences   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Geometric Sequences | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 365)   Assessments   * Quiz 7C (Sections 7.5–7.6) |
| Application Problems—The Internet | | | |
| 371–72 | 7.AP.1 Calculate values related to the internet. | BJU Press Trove   * Video: The Internet | Student Edition   * Exercises |

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| Pages | Objectives | Resources | Assessments |
| Chapter 7 Review | | | |
| 373–77 | Review the skills and concepts taught in Chapter 7. | Activities   * Chapter 7 Review * Cumulative Review 7   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 7 Review exercises |
| Chapter 7 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 7. |  | Assessments   * Chapter 7 Test   BJU Press Trove   * ExamView: Chapter 7 test bank |

Chapter 8: Polynomial Operations

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| Pages | Objectives | Resources | Assessments |
| 8.1 Classifying & Evaluating Polynomials | | | |
| 380–83 | 8.1.1 Define a polynomial.  8.1.2 Classify a polynomial by its number of terms and its degree.  8.1.3 Evaluate a polynomial using given values for the variables. | Activities   * Velocity   BJU Press Trove\*   * Video: God’s Interpretation * PowerPoint presentation   AfterSchoolHelp.com   * Classifying & Evaluating Polynomials | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 380) |
| 8.2 Adding & Subtracting Polynomials | | | |
| 384–88 | 8.2.1 Add polynomials.  8.2.2 Subtract polynomials. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Adding & Subtracting Polynomials | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 384)   Assessments   * Quiz 8A (Sections 8.1–8.2) |
| 8.3 Multiplying Polynomials (2 days) | | | |
| 389–93 | 8.3.1 Model polynomial multiplication with algebra tiles.  8.3.2 Multiply a polynomial by a monomial.  8.3.3 Multiply any 2 polynomials.  8.3.4 Explain how to check results obtained by using the Distributive Property.   BWS Foundations (explain) | Activities   * Using Technology—Checking Polynomial Operations * Polynomials   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Multiplying Polynomials | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 389) |
| 8.4 Multiplying Binomials by Using FOIL | | | |
| 394–98 | 8.4.1 Find the product of 2 binomials by using the FOIL method.  8.4.2 Create polynomial models of real-world problems involving binomials. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Multiplying Binomials by Using FOIL | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 394)   Assessments   * Quiz 8B (Sections 8.3–8.4) |

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| Pages | Objectives | Resources | Assessments |
| 8.5 Special Products (2 days) | | | |
| 399–403 | 8.5.1 Use patterns to find the square of a sum or difference.  8.5.2 Use patterns to find the product of conjugates.  8.5.3 Explain why we can define properties that are consistent and reliable.   BWS Foundations (explain) | Activities   * Multiplying Polynomials   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Special Products | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 399) |
| 8.6 Dividing Polynomials (2 days) | | | |
| 404–9 | 8.6.1 Divide a polynomial by a monomial.  8.6.2 Divide a polynomial by a binomial. | Activities   * Dividing Polynomials * Operations & Properties   BJU Press Trove   * Video: Dividing Polynomials * PowerPoint presentation   AfterSchoolHelp.com   * Dividing Polynomials | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 404)   Assessments   * Quiz 8C (Sections 8.5–8.6) |
| Application Problems—Modeling Population Growth | | | |
| 410–11 | 8.AP.1 Calculate values related to population growth. | BJU Press Trove   * Video: Population Modeling | Student Edition   * Exercises |
| Chapter 8 Review | | | |
| 412–15 | Review the skills and concepts taught in Chapter 8. | Activities   * Chapter 8 Review * Cumulative Review 8   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 8 Review exercises |
| Chapter 8 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 8. |  | Assessments   * Chapter 8 Test   BJU Press Trove   * ExamView: Chapter 8 test bank |

Chapter 9: Factoring Polynomials

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| Pages | Objectives | Resources | Assessments |
| 9.1 Factoring by Using the Distributive Property | | | |
| 418–22 | 9.1.1 Identify the GCF of the terms  of a polynomial.  9.1.2 Factor a common monomial or binomial from a polynomial.  9.1.3 Explain how the Distributive Property justifies factoring out a monomial from a polynomial.  BWS Design (explain) | BJU Press Trove\*   * Video: Patterns in Nature * PowerPoint presentation   AfterSchoolHelp.com   * Factoring by Using the Distributive Property | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 418) |
| 9.2 Factoring Trinomials of the Form x2 + bx + c | | | |
| 423–29 | 9.2.1 Relate the FOIL method to factoring trinomials.  9.2.2 Factor a trinomial of the form  x2 + bx + c. | Activities   * Common Factors & Factoring Trinomials   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Factoring Trinomials of the Form  x2 + bx + c | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 423) |
| 9.3 Factoring Trinomials of the Form ax2 + bx + c (2 days) | | | |
| 430–35 | 9.3.1 Factor a trinomial of the form  ax2 + bx + c or ax2 + bxy + cy2. | BJU Press Trove   * Video: Factoring Trinomials * PowerPoint presentation   AfterSchoolHelp.com   * Factoring Trinomials of the Form  ax2 + bx + c | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 430)   Assessments   * Quiz 9A (Sections 9.1–9.3) |
| 9.4 Special Patterns (2 days) | | | |
| 436–40 | 9.4.1 Apply the pattern to factor a difference of squares.  9.4.2 Apply the pattern to factor a perfect square trinomial.  9.4.3 Evaluate the claim that one’s worldview does not affect how one views patterns in math and science.  BWS Design (evaluate) | Activities   * Factoring Trinomials & Special Patterns * Factoring Differences   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Special Patterns | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 436) |

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| Pages | | Objectives | Resources | Assessments |
| 9.5 Factoring Completely | | | | |
| 441–44 | 9.5.1 Describe a completely  factored polynomial.  9.5.2 Completely factor binomials and trinomials.  9.5.3 Factor polynomials with 4 unlike terms by grouping. | | Activities   * Factoring Completely * Using Technology—Factor Check * Factor Formula   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Factoring Completely | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 441)   Assessments   * Quiz 9B (Sections 9.4–9.5) |
| Application Problems—Glaciers | | | | |
| 445–47 | 9.AP.1 Perform mathematical calculations related to glaciers. | | BJU Press Trove   * Video: Glaciers | Student Edition   * Exercises |
| Chapter 9 Review | | | | |
| 448–49 | Review the skills and concepts taught in Chapter 9. | | Activities   * Chapter 9 Review * Cumulative Review 9   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 9 Review exercises |
| Chapter 9 Test | | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 9. | |  | Assessments   * Chapter 9 Test   BJU Press Trove   * ExamView: Chapter 9 test bank |
| Third Quarter Review & Exam (3 days) | | | | |
|  | Review and demonstrate mastery  of the skills and concepts taught in Chapters 7–9. | | BJU Press Trove   * ExamView: Chapters 7–9  test banks | Assessments   * Exam 3 |

Chapter 10: Radicals

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| Pages | Objectives | Resources | Assessments |
| 10.1 Simplifying Radicals (2 days) | | | |
| 452–58 | 10.1.1 Convert expressions between radical form and exponential form.  10.1.2 Simplify numerical radicals.  10.1.3 Simplify radicals with variable radicands. | Activities   * Math History—Fibonacci * Imaginary Numbers? * Simplifying Radicals   BJU Press Trove\*   * Video: Ultimate Standards * PowerPoint presentation   AfterSchoolHelp.com   * Simplifying Radicals | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 452) |
| 10.2 Multiplying Radicals | | | |
| 459–64 | 10.2.1 Multiply numerical radicals.  10.2.2 Multiply radicals with variable radicands.  10.2.3 Explain how to multiply radicals with different indices.  BWS Reasoning (explain) | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Multiplying Radicals | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 459) |
| 10.3 Dividing Radicals | | | |
| 465–68 | 10.3.1 Divide numerical radicals.  10.3.2 Divide radicals with variable radicands.  10.3.3 Rationalize denominators containing a radical. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Dividing Radicals | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 465)   Assessments   * Quiz 10A (Sections 10.1–10.3) |
| 10.4 Adding & Subtracting Radicals (2 days) | | | |
| 469–73 | 10.4.1 Define like radicals.  10.4.2 Add and subtract numerical radicals.  10.4.3 Add and subtract radicals with variable radicands. | Activities   * Operations with Radicals   BJU Press Trove   * Video: Adding and Subtracting Radicals * PowerPoint presentation   AfterSchoolHelp.com   * Adding & Subtracting Radicals | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 469) |

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| Pages | Objectives | Resources | Assessments |
| 10.5 The Pythagorean Theorem | | | |
| 474–81 | 10.5.1 Apply the Pythagorean Theorem to find an unknown side length in a right triangle.  10.5.2 Apply the converse of the Pythagorean Theorem to determine whether a triangle is a right triangle.  10.5.3 Determine the length and midpoint of segments in the coordinate plane.  10.5.4 Evaluate the claim that the effectiveness of the Pythagorean Theorem proves that Euclidean geometry is true.  BWS Reasoning (evaluate) | Activities   * Pythagorean Triples   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * The Pythagorean Theorem | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 474) |
| 10.6 Multiplying & Dividing Radical Expressions (2 days) | | | |
| 482–85 | 10.6.1 Multiply sums and differences containing radicals by using the FOIL method.  10.6.2 Divide sums and differences containing radicals by using conjugates. | BJU Press Trove   * Video: Multiplying and Dividing Radical Expressions * PowerPoint presentation   AfterSchoolHelp.com   * Multiplying & Dividing Radical Expressions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 482)   Assessments   * Quiz 10B (Sections 10.4–10.6) |
| 10.7 Radical Equations (2 days) | | | |
| 486–89 | 10.7.1 Define a radical equation.  10.7.2 Solve radical equations.  10.7.3 Identify extraneous solutions to radical equations. | Activities   * Radical Expressions & Equations   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Radical Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 486) |

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| Pages | Objectives | Resources | Assessments |
| 10.8 Square Root Functions | | | |
| 490–95 | 10.8.1 Determine the domain of a square root function.  10.8.2 Graph square root functions by plotting coordinate points.  10.8.3 Describe translations and reflections of square root functions. | Activities   * Using Technology—Radical Functions   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Square Root Functions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 490)   Assessments   * Quiz 10C (Sections 10.7–10.8) |
| Application Problems—The Golden Ratio | | | |
| 496–97 | 10.AP.1 Explore mathematical and physical characteristics of the golden ratio. | BJU Press Trove   * Video: Golden Ratio | Student Edition   * Exercises |
| Chapter 10 Review | | | |
| 498–503 | Review the skills and concepts taught in Chapter 10. | Activities   * Chapter 10 Review * Cumulative Review 10   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 10 Review exercises |
| Chapter 10 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 10. |  | Assessments   * Chapter 10 Test   BJU Press Trove   * ExamView: Chapter 10 test bank |

Chapter 11: Quadratic Equations & Functions

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| Pages | Objectives | Resources | Assessments |
| 11.1 Solving Quadratic Equations by Factoring (2 days) | | | |
| 506–10 | 11.1.1 Solve quadratic equations by factoring and applying the Zero Product Property.  11.1.2 Solve real-world problems involving factorable quadratic equations. | Activities   * Solving Quadratic Equations  by Factoring   BJU Press Trove\*   * Video: Mathematical Models * PowerPoint presentation   AfterSchoolHelp.com   * Solving Quadratic Equations  by Factoring | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 506) |
| 11.2 Solving Quadratic Equations by Taking Roots | | | |
| 511–16 | 11.2.1 Describe solutions of the equation x2 = c.  11.2.2 Solve quadratic equations of the form ax2 − c = 0 by taking roots.  11.2.3 Solve quadratic equations of the form  (x + b)2 = c by taking roots.  11.2.4 Solve real-world problems involving quadratics. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Solving Quadratic Equations by Taking Roots | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 511)   Assessments   * Quiz 11A (Sections 11.1–11.2) |
| 11.3 Completing the Square: x2 + bx + c = 0 (2 days) | | | |
| 517–22 | 11.3.1 Complete the square for expressions of the form x2 + bx.  11.3.2 Solve quadratic equations of the form  x2 + bx + c = 0 by completing the square. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Completing the Square:  x2 + bx + c = 0 | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 517) |
| 11.4 Completing the Square: ax2 + bx + c = 0 (2 days) | | | |
| 523–27 | 11.4.1 Solve quadratic equations of the form ax2 + bx + c = 0 by completing the square.  11.4.2 Solve real-world problems involving quadratic equations by completing the square. | Activities   * Taking Roots & Completing the Square   BJU Press Trove   * Video: Completing the Square * PowerPoint presentation   AfterSchoolHelp.com   * Completing the Square:  ax2 + bx + c = 0 | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 523)   Assessments   * Quiz 11B (Sections 11.3–11.4) |

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| Pages | Objectives | Resources | Assessments |
| 11.5 The Quadratic Formula (2 days) | | | |
| 528–32 | 11.5.1 Solve quadratic equations using the quadratic formula.  11.5.2 Explain the proper use of a mathematical model.  BWS Modeling (explain) | Activities   * The Quadratic Formula   BJU Press Trove   * Video: The Quadratic Formula * PowerPoint presentation   AfterSchoolHelp.com   * The Quadratic Formula | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 528) |
| 11.6 More Quadratic Equations | | | |
| 533–37 | 11.6.1 Describe the solutions of a quadratic equation by evaluating the discriminant.  11.6.2 Solve quadratic equations by using the most efficient method.  11.6.3 Model quadratics by writing equations in standard form using given solutions. | Activities   * Polynomial & Radical Equations   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * More Quadratic Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 533)   Assessments   * Quiz 11C (Sections 11.5–11.6) |
| 11.7 Quadratic Functions: f(x) = ax2 + c (2 days) | | | |
| 538–42 | 11.7.1 Graph quadratic functions of the form f(x) = ax2 + c by plotting coordinate points.  11.7.2 Describe the effect of a and c on the graph of a quadratic function. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Quadratic Functions: f(x) = ax2 + c | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 538) |
| 11.8 Quadratic Functions: f(x) = a(x − h)2 + k (2 days) | | | |
| 543–48 | 11.8.1 Graph quadratic functions of the form f(x) = a(x − h)2 + k.  11.8.2 Find the vertex of the quadratic function  f(x) = ax2 + bx + c.  11.8.3 Graph quadratic functions in standard form.  11.8.4 Defend the claim that mathematical models are useful but limited.  BWS Modeling (formulate) | Activities   * Quadratic Functions, Optimization & Estimation   BJU Press Trove   * Video: Quadratic Functions * PowerPoint presentation   AfterSchoolHelp.com   * Quadratic Functions:  f(x) = a(x − h)2 + k | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 543) |

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| Pages | Objectives | Resources | Assessments |
| 11.9 Zeros of a Quadratic Function | | | |
| 549–53 | 11.9.1 Find the y-intercept of a quadratic function.  11.9.2 Find the zeros of a quadratic function.  11.9.3 Graph a quadratic function using its intercepts and vertex. | Activities   * Using Technology—Solving Quadratic Equations by Graphing * The Quadratic Function in Action   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Zeros of a Quadratic Function | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 549)   Assessments   * Quiz 11D (Sections 11.7–11.9) |
| Application Problems—Water Fountains | | | |
| 554–55 | 11.AP.1 Calculate values related to water motion. | BJU Press Trove   * Video: Water Fountains | Student Edition   * Exercises |
| Chapter 11 Review | | | |
| 556–60 | Review the skills and concepts taught in Chapter 11. | Activities   * Chapter 11 Review * Cumulative Review 11   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 11 Review exercises |
| Chapter 11 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 11. |  | Assessments   * Chapter 11 Test   BJU Press Trove   * ExamView: Chapter 11 test bank |
| STEM Project—Mission Control | | | |
| 561 | S.2.1 Design a Ping-Pong ball launcher by using the engineering design process.  S.2.2 Research the materials and design for projectile launchers.  S.2.3 Assemble a launcher for launching a Ping-Pong ball at a target.  S.2.4 Optimize the efficiency of the launcher by evaluating and modifying the design. | Activities   * STEM—Mission Control | Activities   * STEM—Mission Control project grading rubric |

Chapter 12: Rational Expressions & Equations

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| Pages | Objectives | Resources | Assessments |
| 12.1 Simplifying Rational Expressions | | | |
| 564–68 | 12.1.1 Determine values for which a rational expression is undefined.  12.1.2 Simplify rational expressions by canceling common factors.  12.1.3 Defend the claim that mathematics helps us see design in creation.  BWS Design (explain) | BJU Press Trove\*   * Video: Design in Nature * PowerPoint presentation   AfterSchoolHelp.com   * Simplifying Rational Expressions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 564) |
| 12.2 Multiplying & Dividing Rational Expressions | | | |
| 569–72 | 12.2.1 Multiply rational expressions.  12.2.2 Divide rational expressions. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Multiplying & Dividing Rational Expressions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 569)   Assessments   * Quiz 12A (Sections 12.1–12.2) |
| 12.3 Adding & Subtracting Expressions with Common Denominators (2 days) | | | |
| 573–76 | 12.3.1 Add rational expressions with common denominators.  12.3.2 Subtract rational expressions with common denominators. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Adding & Subtracting Expressions with Common Denominators | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 573) |
| 12.4 Adding & Subtracting Expressions with Unlike Denominators (2 days) | | | |
| 577–82 | 12.4.1 Find the least common multiple of 2 algebraic expressions.  12.4.2 Add rational expressions with unlike denominators.  12.4.3 Subtract rational expressions with unlike denominators. | BJU Press Trove   * Video: Adding Rational Expressions * PowerPoint presentation   AfterSchoolHelp.com   * Adding & Subtracting Expressions with Unlike Denominators | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 577)   Assessments   * Quiz 12B (Sections 12.3–12.4) |

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| Pages | Objectives | Resources | Assessments |
| 12.5 Mixed & Complex Expressions (2 days) | | | |
| 583–87 | 12.5.1 Simplify mixed rational expressions.  12.5.2 Simplify complex rational expressions.  12.5.3 Apply what is learned through math to praise the Creator.  BWS Design (apply) | Activities   * Operations with Rational Expressions   BJU Press Trove   * Video: Mixed Rational Expressions * PowerPoint presentation   AfterSchoolHelp.com   * Mixed & Complex Expressions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 583) |
| 12.6 Solving Rational Equations | | | |
| 588–92 | 12.6.1 Solve rational equations by using cross products.  12.6.2 Solve rational equations by clearing fractions. | Activities   * Using Technology—Solving Rational Equations * Rational Equations   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Solving Rational Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 588)   Assessments   * Quiz 12C (Sections 12.5–12.6) |
| 12.7 Applying Rational Equations (2 days) | | | |
| 593–600 | 12.7.1 Solve real-world rate problems by writing and solving rational equations. | Activities   * Applying Rational Equations * Electrical Resistance   BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Applying Rational Equations | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 593) |
| 12.8 Graphing Rational Functions | | | |
| 601–7 | 12.8.1 Define a rational function.  12.8.2 Graph a rational function of the form f(x) =  + k.  12.8.3 Identify the center and asymptotes of a rational function in the form  f(x) =  + k. | BJU Press Trove   * PowerPoint presentation   AfterSchoolHelp.com   * Graphing Rational Functions | Student Edition   * Skill Checks * Exercises   Teacher Edition   * Bell ringer (p. 601)   Assessments   * Quiz 12D (Sections 12.7–12.8) |

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| Pages | Objectives | Resources | Assessments |
| Application Problems—Arithmetic & Harmonic Means | | | |
| 608–9 | 12.AP.1 Calculate arithmetic and harmonic means. | BJU Press Trove   * Video: Arithmetic and Harmonic Means | Student Edition   * Exercises |
| Chapter 12 Review | | | |
| 610–13 | Review the skills and concepts taught in Chapter 12. | Activities   * Chapter 12 Review * Cumulative Review 12   BJU Press Trove   * Game: Mathardy | Student Edition   * Chapter 12 Review exercises |
| Chapter 12 Test | | | |
|  | Demonstrate mastery of skills and concepts taught in Chapter 12. |  | Assessments   * Chapter 12 Test   BJU Press Trove   * ExamView: Chapter 12 test bank |
| Fourth Quarter Review & Exam (3 days) | | | |
|  | Review and demonstrate mastery of the skills and concepts taught in Chapters 10–12. |  | Assessments   * Exam 4   BJU Press Trove   * ExamView: Chapters 10–12 test banks |