Lesson Plan Overview  
Fundamentals of Math 3rd Edition

Chapter 1: Whole Numbers & Decimals

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 1–2 | 1.1 | 1–7 | Activities   * Decimal Place Value   Additional Materials   * athlete name tags (optional)   AfterSchoolHelp.com   * Fundamentals of Math, Whole Numbers & Decimals | **Topic:** Ordering and Rounding  **Skills:** expressing numbers in standard, word,  or expanded form; comparing and ordering decimal numbers; rounding numbers to a designated place value  **BWS:** Knowledge: identifying the basic assumption underlying all of mathematics |
| 3 | 1.2 | 8–13 | Activities   * Comparing, Estimating, and  Adding Whole Numbers * Estimating Sums   Additional Materials   * student whiteboards * task cards (optional) | **Topic:** Addition and Subtraction  **Skills:** adding and subtracting whole numbers and decimals, estimating sums and differences, solving real-world problems involving whole numbers and decimals |
| 4 | 1.3 | 14–19 | Additional Materials   * student whiteboards | **Topic:** Multiplication  **Skills:** multiplying whole numbers and decimals, estimating products using rounding, solving real-world problems involving whole numbers and decimals |
| 5–6 | 1.4 | 20–25 | Activities   * Rounding Decimal Quotients * Calculating Camp Costs * Operations with Decimals   Additional Materials   * calculators (optional) * student whiteboards   Assessment   * Quiz 1A (1.1−1.2) | **Topic:** Division  **Skills:** dividing whole numbers and decimals, converting a fraction to a decimal, estimating quotients using compatible numbers, solving real-world problems involving the quotients of whole numbers and decimals  **BWS:** Knowledge: explaining how division by zero illustrates that math is a human activity |

Chapter 1: Whole Numbers & Decimals

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 7 | 1.5 | 26–30 | Activities   * Exponents   Additional Materials   * various sizes of Rubik’s Cubes * timer | **Topic:** Exponents  **Skills:** expressing repeated multiplication using exponents, expanding a power to its factored form and simplifying, expressing a whole number in expanded exponential form  **BWS:** Knowledge: demonstrating the usefulness of exponents in describing creation |
| 8–9 | 1.6 | 31–36 | Instructional Aids   * 1.6: Exponent Warm-up Activity   Activities   * Approximating the Root Cause   Additional Materials   * student whiteboards * number-line printout (optional) * calculators * timer   Assessment   * Quiz 1B (1.3–1.4) | **Topic:** Square Roots  **Skills:** finding the square root of a perfect square, estimating an irrational square root by determining the two consecutive numbers it lies between, plotting irrational numbers on a number line |
| 10 | 1.7 | 37–41 | Activities   * Order of Operations   Additional Materials   * student whiteboards | **Topic:** Order of Operations  **Skills:** stating and using the order of operations to simplify numerical expressions |
| 11 | Chapter 1 Review | 42–43 | Teacher Tools Online   * Chapter 01 Mathardy   Assessment   * Quiz 1C (1.5–1.7) |  |
| 12 | Test |  | Assessment   * Chapter 1 Test | |

Chapter 2: Integers

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 13–14 | 2.1 | 45–51 | Activities   * Practice with Sets * Subsets   Additional Materials   * number cards (optional) * student whiteboards   AfterSchoolHelp.com   * Fundamentals of Math, Integers | **Topic:** Numbers and Sets  **Skills:** classifying numbers by number sets; identifying sets as empty, finite, or infinite; determining subsets of number sets  **BWS:** Reasoning: identifying sets as a  human convention |
| 15 | 2.2 | 52–56 | Activities   * Comparing Integers and  Absolute Value   Additional Materials   * rulers | **Topic:** Opposites and Absolute Value  **Skills:** determining opposite numbers; comparing rational numbers using  <, >, or =; finding the absolute value of numbers; simplifying expressions containing absolute values  **BWS:** Reasoning: interpreting math facts as consistent or inconsistent with assumptions |
| 16 | 2.3 | 57–61 | Additional Materials   * integer counters or dot paper (optional) * red and yellow colored pencils (optional) * rulers   Assessment   * Quiz 2A (2.1−2.2) | **Topic:** Addition of Integers  **Skills:** adding integers with like signs, adding integers with different signs, solving real-world problems involving the addition of integers |
| 17–18 | 2.4 | 62–68 | Activities   * Adding and Subtracting Integers * Integer Applications   Keyword Search   * I Have Who Has Addition Subtraction Integers   Additional Materials   * rulers * integer counters or dot paper (optional) * red and yellow colored pencils (optional) | **Topic:** Subtraction of Integers  **Skills:** subtracting integers, finding the distance between two integers on a number line, solving real-world problems involving the subtraction of integers |

Chapter 2: Integers

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 19 | 2.5 | 69–73 |  | **Topic:** Multiplication of Integers  **Skills:** multiplying integers, simplifying powers of integers, solving real-world problems involving the multiplication of integers  **BWS:** Reasoning: explaining why a negative times a negative is positive |
| 20 | Problem Solving | 74–75 | Assessment   * Quiz 2B (2.3−2.4) |  |
| 21 | 2.6 | 76–81 | Activities   * Operations with Integers * Amazing Integer Review   Additional Materials   * rulers * calculators (optional) | **Topic:** Division of Integers  **Skills:** dividing integers, solving real-world problems involving division of integers  **BWS:** Reasoning: recalling different historical interpretations of division by zero |
| 22 | 2.7 | 82–85 |  | **Topic:** Integer Operations  **Skills:** simplifying numerical expressions involving integers, distinguishing between testing for consistency in mathematics and determining truth |
| 23 | Chapter 2 Review | 86–87 | Activities   * Chapter 2 Cumulative Review   Teacher Tools Online   * Chapter 02 Mathardy   Assessment   * Quiz 2C (2.5–2.7) |  |
| 24 | Test |  | Assessment   * Chapter 2 Test | |

Chapter 3: Numerical and Algebraic Expressions

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 25–26 | 3.1 | 89–95 | Instructional Aids   * 3.1: Variables and Expressions   Activities   * Algebraic Expressions * Using Algebraic Expressions * Cooperative Learning: Soccer Field Borders   AfterSchoolHelp.com   * Fundamentals of Math, Numerical and Algebraic Expressions | **Topic:** Variables and Expressions  **Skills:** translating algebraic expressions, evaluating algebraic expressions, modeling real-world situations  **BWS:** Modeling: recognizing models as simplified representations that help us make sense of the world |
| 27–28 | 3.2 | 96–102 | Activities   * Properties of Addition * Properties of Multiplication | **Topic:** Properties of Addition and Multiplication  **Skills:** applying the properties of addition and multiplication to write equivalent expressions and compute mentally  **BWS:** Modeling: explaining the use of mathematical models |
| 29–30 | 3.3 | 103–8 | Activities   * Applying the Distributive Property   Additional Materials   * algebra tiles (optional) * student whiteboards   Assessment   * Quiz 3A (3.1–3.2) | **Topic:** The Distributive Property  **Skills:** applying the Distributive Property to write equivalent expressions and compute mentally  **BWS:** Modeling: explaining why mathematical models appear to be objective |
| 31–32 | 3.4 | 109–13 | Additional Materials   * student whiteboards | **Topic:** Factoring  **Skills:** applying the Distributive Property to factor linear expressions and analyze a real-world situation |
| 33 | 3.5 | 114–21 | Additional Materials   * algebra tiles (optional) | **Topic:** Combining Like Terms  **Skills:** identifying and combining like terms, writing equivalent expressions using factoring to represent real-world situations |

Chapter 3: Numerical and Algebraic Expressions

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 34 | 3.6 | 122–27 | Activities   * Applying Linear Expressions * STEM Project: Weather Observation Station   Assessment   * Quiz 3B (3.3–3.4) | **Topic:** Adding and Subtracting Linear Expressions  **Skills:** adding and subtracting linear expressions, solving real-word problems by adding or subtracting linear expressions  **BWS:** Modeling: comparing the algorithms in simple and complex mathematical models |
| 35–36 | 3.7 | 128–32 | Instructional Aids   * 3.7A: Matching the Powers * 3.7B: 6-Tab Graphic Organizer   Assessment   * Quiz 3C (3.5–3.6) | **Topic:** Properties of Exponents  **Skills:** simplifying expressions by applying the properties of exponents |
| 37–38 | 3.8 | 133–39 | Activities   * Multiplying and Dividing by Powers of Ten * Scientific Notation * Applying Scientific Notation * Scientific Notation with Negative Exponents | **Topic:** Scientific Notation  **Skills:** multiplying and dividing by powers of 10, expressing large numbers in scientific notation, multiplying numbers in scientific notation, solving real-world problems using scientific notation |
| 39 | Chapter 3 Review | 140–41 | Teacher Tools Online   * Chapter 03 Mathardy   Assessment   * Quiz 3D (3.7–3.8) |  |
| 40 | Test |  | Assessment   * Chapter 3 Test | |
| 41–42 | Review and Test |  | Activities   * Chapter 3 Cumulative Review   Assessment   * 1st Quarter Exam | |

Chapter 4: Fraction Theory

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 43 | 4.1 | 143–47 | Instructional Aids   * 4.1: Divisibility Test Rules Foldable   Activities   * Divisibility   AfterSchoolHelp.com   * Fundamentals of Math, Fraction Theory | **Topic:** Prime Factorization  **Skills:** identifying prime or composite numbers, finding the prime factorization of composite numbers  **BWS:** Design: recalling that every integer greater than one has a unique prime factorization |
| 44 | 4.2 | 148–54 | Instructional Aids   * 4.2A: Tiling Activity PowerPoint * 4.2B: Tiling Worksheet   Activities   * The Euclidean Algorithm | **Topic:** Greatest Common Factor  **Skills:** finding the greatest common factor of given numbers and applying to real-world problems, determining whether given numbers are relatively prime  **BWS:** Design: recognizing there are an infinite number of prime numbers |
| 45 | 4.3 | 155–60 | Activities   * Practicing with the GCF and LCM * Problem Solving Using the GCF and LCM | **Topic:** Least Common Multiple  **Skills:** listing multiples of a number, finding the least common multiple of two or three numbers, solving real-world problems using the least common multiple |
| 46 | 4.4 | 161–65 | Activities   * Terms Across and Down * Amazing Equivalent Fractions   Additional Materials   * student whiteboards * timer | **Topic:** Renaming Fractions  **Skills:** reducing fractions to lowest terms, expressing a mixed number as an improper fraction, expressing an improper fraction as a mixed number  **BWS:** Design: describing how prime numbers are used to convert between equivalent fractions |

Chapter 4: Fraction Theory

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 47–48 | 4.5 | 168–72 | Assessment   * Quiz 4A (4.1−4.3) | **Topic:** Rational Numbers  **Skills:** expressing a number in rational number form, converting between rational number forms, classifying numbers as rational or irrational |
| 49 | 4.6 | 173–77 | Additional Materials   * rulers (optional) | **Topic:** Comparing Rational Numbers  **Skills:** solving for a missing denominator, comparing and ordering rational numbers, graphing rational numbers on a number line |
| 50 | Problem Solving | 166–67 | Assessment   * Quiz 4B (4.4−4.6) |  |
| 51 | Chapter 4 Review | 178–79 | Activities   * Chapter 4 Cumulative Review   Teacher Tools Online   * Chapter 04 Mathardy |  |
| 52 | Test |  | Assessment   * Chapter 4 Test | |

Chapter 5: Fraction Operations

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 53 | 5.1 | 181–86 | Activities   * Adding Fractions   Additional Materials   * student whiteboards   AfterSchoolHelp.com   * Fundamentals of Math, Fraction Operations | **Topic:** Adding Fractions  **Skills:** adding fractions with like and unlike denominators, solving real-world problems involving the addition of fractions |
| 54 | 5.2 | 187–90 | Activities   * Adding and Subtracting Fractions | **Topic:** Subtracting Fractions  **Skills:** subtracting fractions with like and unlike denominators, simplifying expressions containing rational numbers using the properties of addition, solving real-world problems involving the subtraction of fractions  **BWS:** Reasoning: identifying the mathematical property that allows a fraction to be replaced by an equivalent fraction |
| 55–56 | 5.3 | 191–95 | Activities   * Mixed Numbers Applications | **Topic:** Adding and Subtracting Mixed Numbers  **Skills:** adding and subtracting mixed numbers, estimating sums and differences of mixed numbers, simplifying expressions containing rational numbers using the properties of addition, solving real-world problems involving the addition and subtraction of mixed numbers |
| 57 | 5.1–5.3 review |  | Assessment   * Quiz 5A (5.1–5.3) |  |

Chapter 5: Fraction Operations

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 58 | 5.4 | 196–200 | Activities   * Visualizing the Multiplication of Fractions   Additional Materials   * a cake illustration * circle cutouts * scissors | **Topic:** Multiplying Fractions  **Skills:** multiplying proper fractions and mixed numbers, simplifying expressions containing rational numbers using the properties of multiplication, solving real-world problems involving the multiplication of fractions |
| 59 | 5.5 | 201–5 | Activities   * Visualizing the Division of Fractions * Mixed Numbers Applications | **Topic:** Dividing Fractions  **Skills:** dividing fractions and mixed numbers, solving real-world problems involving the division of fractions  **BWS:** Reasoning: defending the process of changing division by a fraction to multiplication by the reciprocal |
| 60 | 5.6 | 206–10 | Additional Materials   * student whiteboards | **Topic:** Rational Expressions  **Skills:** simplifying rational number expressions and the square root of selected rational numbers |
| 61 | 5.7 | 211–15 | Additional Materials   * student whiteboards   Assessment   * Quiz 5B (5.4−5.5) | **Topic:** Equivalent Algebraic Expressions  **Skills:** writing an equivalent fractional expression by applying the Distributive Property, combining like terms with fractional coefficients, factoring a common fractional factor from an algebraic expression |
| 62–63 | Chapter 5 Review | 216–17 | Activities   * Chapter 5 Cumulative Review   Teacher Tools Online   * Chapter 05 Mathardy   Assessment   * Quiz 5C (5.6−5.7) |  |
| 64 | Test |  | Assessment   * Chapter 5 Test | |

Chapter 6: Equations and Inequalities

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 65 | 6.1 | 219–25 | Instructional Aids   * 6.1: Writing Equations   Additional Materials   * colored pencils * highlighters   AfterSchoolHelp.com   * Fundamentals of Math, Equations and Inequalities | **Topic:** Writing Equations  **Skills:** identifying the parts of an algebraic equation, translating sentences into equations  **BWS:** Modeling: writing one-step equations to model real-world situations |
| 66–67 | 6.2 | 226–31 | Activities   * Solving Addition and Subtraction Equations   Additional Materials   * student whiteboards * colored pencils | **Topic:** Addition and Subtraction Equations  **Skills:** determining whether a given number is a solution, solving addition or subtraction equations, solving real-world problems using addition and subtraction equations |
| 68 | 6.3 | 232–36 | Activities   * Solving Multiplication and Division Equations   Additional Materials   * student whiteboards | **Topic:** Multiplication and Division Equations  **Skills:** solving multiplication or division equations, solving real-world problems using algebraic equations |
| 69–70 | 6.4 | 237–42 | Activities   * Solving Two-Step Equations * Writing and Solving Equations * STEM Project: Ohm’s Law  (V = IR)   Additional Materials   * student whiteboards   Assessment   * Quiz 6A (6.1–6.3) | **Topic:** Two-Step Equations  **Skills:** solving an equation in the form  ax + b = c, where a, b, and c are rational numbers; writing two-step equations that model real-world situations  **BWS:** Modeling: describing the orderliness found in solving equations |
| 71 | 6.5 | 243–47 | Activities   * Equations and Grouping Symbols   Additional Materials   * student whiteboards | **Topic:** Equations with Grouping Symbols  **Skills:** solving two-step equations with grouping symbols, writing and solving multistep equations that model real-world situations  **BWS:** Modeling: evaluating the importance of order when solving equations |

Chapter 6: Equations and Inequalities

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 72–73 | 6.6 | 250–55 | Instructional Aids   * 6.6: Inequality Card Sort Activity   Additional Materials   * student whiteboards   Assessment   * Quiz 6B (6.4–6.5) | **Topic:** Addition and Subtraction Inequalities  **Skills:** translating inequality statements involving addition and subtraction, determining whether a value is a solution to an inequality, solving inequalities using the properties of addition and subtraction, graphing solutions for an inequality on a number line |
| 74 | 6.7 | 256–60 | Additional Materials   * student whiteboards | **Topic:** Multiplication and Division Inequalities  **Skills:** translating inequality statements involving multiplication and division, solving inequalities and graphing their solutions on a number line, explaining how solving an inequality is different from solving an equation |
| 75 | 6.8 | 261–65 | Instructional Aids   * 6.8: Two-Step Inequalities   Activities   * Solving Two-Step Inequalities * Writing and Solving Inequalities   Additional Materials   * student whiteboards | **Topic:** Two-Step Inequalities  **Skills:** translating sentences into inequalities, analyzing mathematical and real-world situations to write and solve inequalities |
| 76 | Problem Solving | 248–49 | Assessment   * Quiz 6C (6.6–6.8) |  |
| 77 | Chapter 6 Review | 266–67 | Activities   * Chapter 6 Cumulative Review   Teacher Tools Online   * Chapter 06 Mathardy |  |
| 78 | Test |  | Assessment   * Chapter 6 Test | |

Chapter 7: Ratios and Proportions

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 79 | 7.1 | 269–76 | Activities   * Writing and Simplifying Ratios * Unit Pricing   AfterSchoolHelp.com   * Fundamentals of Math, Ratios and Proportions | **Topic:** Ratios and Rates  **Skills:** expressing a comparison of numbers as a ratio or a rate, solving for equivalent ratios, expressing a comparison of numbers as a unit rate  **BWS:** Design: explaining the evidence of design found in ratios and rates |
| 80 | 7.2 | 277–81 | Activities   * Cooking for a Crowd | **Topic:** Complex Rates  **Skills:** simplifying complex ratios, expressing comparisons of rational numbers as a unit rate, finding missing rational terms within a proportional relationship |
| 81 | 7.3 | 282–87 | Activities   * Rates and Ratios * Proportion   Additional Materials   * stopwatch or timer (optional) * calculators (optional) | **Topic:** Proportions  **Skills:** determining whether two ratios form a proportion, solving for a missing term of a proportion  **BWS:** Design: converting real-world patterns into mathematical statements |
| 82 | 7.1–7.3 Review |  | Assessment   * Quiz 7A (7.1–7.3) |  |

Chapter 7: Ratios and Proportions

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 83 | 7.4 | 288–93 | Activities   * Setting Up to Scale   Additional Materials   * rulers * calculators (optional) | **Topic:** Scale Models  **Skills:** finding the real-world length represented by the scale model, finding the scale length to represent real distances, finding the scale used for a model |
| 84–86 | 7.5 | 294–99 | Instructional Aids   * 7.5 Reading Graphs   Activities   * Graphing Potential Earnings   Additional Materials   * graph paper * rulers | **Topic:** Proportional Relationships  **Skills:** graphing ratios on a coordinate plane, analyzing proportional relationships graphically, finding the constant of proportionality from a graph or equation, solving for missing terms in a ratio using the constant of proportionality, writing an equation in the form of y = kx using the constant of proportionality |
| 87 | Chapter 7 Review | 300–301 | Teacher Tools Online   * Chapter 07 Mathardy   Assessment   * Quiz 7B (7.4–7.5) |  |
| 88 | Test |  | Assessment   * Chapter 7 Test | |
| 89–90 | Review and Test |  | Activities   * Chapter 7 Cumulative Review   Assessment   * 2nd Quarter Exam | |

Chapter 8: Percents

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 91 | 8.1 | 303–8 | Activities   * Renaming Percents   Additional Materials   * student whiteboards   AfterSchoolHelp.com   * Fundamentals of Math, Percents | **Topic:** Percents  **Skills:** converting between rational numbers and percents, comparing and ordering percents and rational numbers  **BWS:** Ethics: explaining why percentages are convincing |
| 92 | 8.2 | 309–13 | Activities   * Sales Tax   Additional Materials   * student whiteboards * calculators (optional) | **Topic:** Percent of a Number  **Skills:** finding the percent of a number using multiplication, solving problems involving percents less than 1% and greater than 100%, solving real-world problems involving percents and sales tax |
| 93 | Problem Solving | 314 |  |  |
| 94 | 8.3 | 315–20 | Activities   * Finding Percents * Percents in Action—The Cost of Pet Ownership   Additional Materials   * calculators (optional) | **Topic:** Proportions and Percent  **Skills:** solving problems involving percents using a proportion, solving percent problems using data from graphical representations, solving real-world problems involving percentages and the complements of a percentage  **BWS:** Ethics: analyzing a visual representation that misrepresents data |
| 95–96 | 8.4 | 321–25 | Activities   * Percent Equations * Simple Interest   Additional Materials   * task cards (optional) * calculators (optional)   Assessment   * Quiz 8A (8.1–8.3) | **Topic:** Percent Equations  **Skills:** solving percent problems using the percent equation, solving real-world percent problems including problems involving interest and sales tax |

Chapter 8: Percents

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 97 | 8.5 | 326–29 | Activities   * Photo Sizing   Additional Materials   * rulers * student whiteboards (optional) * calculators (optional) | **Topic:** Enlargements and Reductions  **Skills:** identifying percents as an enlargement or a reduction, finding the percent setting needed to obtain an image of a given size |
| 98 | 8.4–8.5 Review |  | Assessment   * Quiz 8B (8.4–8.5) |  |
| 99 | 8.6 | 330–34 | Activities   * Percent Change * Weather Changes   Additional Materials   * calculators (optional) | **Topic:** Percent Change  **Skills:** finding the amount of change between two values, finding the percent change between two values |
| 100 | 8.7 | 335–39 | Activities   * Retail Sales   Additional Materials   * word splash matching cards or an online matching activity | **Topic:** Percent Applications  **Skills:** solving real-world problems involving discounts, solving real-world problems involving markups |
| 101–2 | Chapter 8 Review | 340–41 | Activities   * Chapter 8 Cumulative Review   Teacher Tools Online   * Chapter 08 Mathardy   Assessment   * Quiz 8C (8.6–8.7) |  |
| 103 | Test |  | Assessment   * Chapter 8 Test | |

Chapter 9: Measurement

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 104 | 9.1 | 343–48 | Additional Materials   * foldable ruler and other measuring devices * yardstick (optional) * standard ruler (optional)   AfterSchoolHelp.com   * Fundamentals of Math, Measurement | **Topic:** Customary Units of Length  **Skills:** converting between units of length using proportions and unit analysis, solving multistep real-world problems involving measures of length  **BWS:** Knowledge: explaining why it is possible to measure |
| 105 | 9.2 | 349–53 | Activities   * Customary Unit Conversions * Measurements of Bible Times   Additional Materials   * calculators (optional) * 2 objects of identical size and shape, but different weights (e.g., WIFFLE ball and baseball) | **Topic:** Customary Units of Capacity and Weight  **Skills:** converting between units of capacity and weight using proportions and unit analysis, solving multistep real-world problems involving measures of capacity and weight |
| 106 | 9.3 | 354–58 | Activities   * Metric Units of Length * Renaming Metric Units * Mass   Additional Materials   * baseball bat * 10.75 oz can of soup * paper clip * dime * liter bottle of water * container holding 4 c of water * grains of sand * images of a small car, a small church baptistry, and an aerial view of 5 city blocks * metric unit cards * timer (optional) | **Topic:** Metric Units  **Skills:** converting between metric units using unit analysis, solving multistep real-world problems involving metric units |

Chapter 9: Measurement

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 107 | 9.1–9.3 Review |  | Assessment   * Quiz 9A (9.1–9.2) |  |
| 108 | 9.4 | 359–62 | Activities   * Metric/Customary Unit Conversions * Converting Temperature * Vacation to Canada * Metric Recipe Conversion   Additional Materials   * calculators * 12 in. ruler graduated in millimeters and parts of inches * meter stick * yardstick * Pyrex® Mini Measuring Cup or a child’s metric medicine syringe * kitchen measuring tools in customary and metric units | **Topic:** Relating Metric and Customary Units  **Skills:** converting between related customary and metric measures, solving multistep real-world problems involving conversions between measurement systems  **BWS:** Knowledge: evaluating the limitations of measurement in describing the world |
| 109 | 9.5 | 363–66 | Activities   * Conversion Maze * Pool Preparation   Additional Materials   * calculators | **Topic:** Converting Rates  **Skills:** converting between rates involving distance, capacity, and weight |
| 110–11 | Chapter 9 Review | 367 | Activities   * Chapter 9 Cumulative Review   Teacher Tools Online   * Chapter 09 Mathardy   Assessment   * Quiz 9B (9.3−9.5) |  |
| 112 | Test |  | Assessment   * Chapter 9 Test | |

Chapter 10: Introduction to Geometry

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 113 | 10.1 | 369–75 | Activities   * Measuring Angles   Additional Materials   * protractors * rulers   AfterSchoolHelp.com   * Fundamentals of Math, Introduction to Geometry | **Topic:** Basic Geometry Terms  **Skills:** describing basic geometric figures; classifying angles according to their measures; identifying intersecting, parallel, and perpendicular lines  **BWS:** Reasoning: explaining why lines are straight in plane geometry |
| 114 | 10.2 | 376–81 | Activities   * Lines and Angles | **Topic:** Pairs of Angles  **Skills:** identifying pairs of angles; finding angle measures formed by complementary, supplementary, and vertical angles; writing and solving equations that model angle relationships |
| 115 | 10.3 | 382–88 | Additional Materials   * square and rectangular cardboard boxes * ruler or compass * posterboard * magnets or tape | **Topic:** Quadrilaterals  **Skills:** classifying quadrilaterals by their angle measures and side lengths, using the perimeter to find missing side lengths of a quadrilateral, using the characteristics of quadrilaterals to find missing angle and side measures |
| 116 | 10.4 | 389–94 | Activities   * Triangles * Finding Composite Area * Construction of Triangles   Additional Materials   * globe * home improvement store magazine   Assessment   * Quiz 10A (10.1–10.3) | **Topic:** Parallelograms  **Skills:** calculating the area and finding missing dimensions of a parallelogram, solving real-world problems involving parallelograms  **BWS:** Reasoning: explaining why there are no parallel lines in spherical geometry |

Chapter 10: Introduction to Geometry

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 117–18 | 10.5 | 395–400 | Additional Materials   * triangle vocabulary flashcards * parallelograms and trapezoids cut from posterboard * a string with a weight attached to one end | **Topic:** Triangles and Trapezoids  **Skills:** classifying triangles by their side lengths, solving mathematical and real-world problems involving triangles and trapezoids |
| 119 | 10.6 | 401–5 | Activities   * Geometry Terms   Additional Materials   * rulers * globe or sphere (optional) * 2 different colors of paper (3 sheets of each) * 5 straws | **Topic:** Exploring Triangle Theorems  **Skills:** solving for a missing angle within a triangle, solving for a missing length using the Pythagorean Theorem, determining whether three segments can form a triangle |
| 120 | Problem Solving | 406–7 | Assessment   * Quiz 10B (10.4–10.6) |  |
| 121–22 | Chapter 10 Review | 408–11 | Activities   * Chapter 10 Cumulative Review   Teacher Tools Online   * Chapter 10 Mathardy |  |
| 123 | Test |  | Assessment   * Chapter 10 Test | |

Chapter 11: Exploring Area and Volume

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 124–25 | 11.1 | 413–19 | Activities   * Areas of Circles   Additional Materials   * rulers * vegetable or soup cans * ribbon or flexible tape measure * cardstock circle cut into 8 sectors   AfterSchoolHelp.com   * Fundamentals of Math, Exploring Area and Volume | **Topic:** Circles  **Skills:** calculating and solving real-world problems involving the circumference and area of a circle, calculating the area of composite figures involving circles, explaining why area is measured in square units |
| 126 | 11.2 | 420–26 |  | **Topic:** Similar Polygons  **Skills:** finding missing side lengths within similar polygons, solving problems involving the area of similar polygons |
| 127–28 | 11.3 | 427–33 | Additional Materials   * 3D models of prisms (optional) * cardboard box disassembled to demonstrate a net (optional) * graph paper   Assessment   * Quiz 11A (11.1–11.2) | **Topic:** Surface Area of Prisms  **Skills:** calculating and solving real-world problems involving the surface area of a prism  **BWS:** Modeling: explaining how assumptions are used in modeling |
| 129 | 11.4 | 434–39 | Activities   * Three-Dimensional Figures * Surface Area   Additional Materials   * 3D models of regular pyramids (optional) * tracing paper (optional) * graph paper (optional) * rulers | **Topic:** Surface Area of Pyramids  **Skills:** calculating and solving real-world problems involving the surface area of pyramids |

Chapter 11: Exploring Area and Volume

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 130–31 | 11.5 | 440–46 | Activities   * Volume * Cross Sections of 3D Shapes   Additional Materials   * 24 small cubes (optional) * plastic (fillable) models of a cube and a square pyramid with the same-size base and height   Assessment   * Quiz 11B (11.3–11.4) | **Topic:** Volume of Prisms and Pyramids  **Skills:** calculating and solving real-world problems involving the volume of prisms and pyramids, identifying cross sections of a prism and a pyramid  **BWS:** Modeling: explaining how intentions and context affect modeling |
| 132 | 11.6 | 447–53 | Activities   * Derived Areas and Volumes * Surface Area and Volume of Cans * STEM Project: Water Timer   Additional Materials   * 3D models of prisms * can wrapped in paper (optional) * vegetable or soup cans with labels * flexible tape measure or ruler and ribbon | **Topic:** Surface Area and Volume of Cylinders  **Skills:** calculating and solving real-world problems involving the surface area and volume of a cylinder, identifying the cross sections of a cylinder |
| 133–34 | Chapter 11 Review | 454–55 | Teacher Tools Online   * Chapter 11 Mathardy   Assessment   * Quiz 11C (11.5–11.6) |  |
| 135 | Test |  | Assessment   * Chapter 11 Test | |
| 136–38 | Review and Test |  | Activities   * Chapter 11 Cumulative Review   Assessment   * 3rd Quarter Exam | |

Chapter 12: Probability

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 139–40 | 12.1 | 457–62 | Activities   * Simple Events   Additional Materials   * calculators   AfterSchoolHelp.com   * Fundamentals of Math, Probability | **Topic:** Simple Events  **Skills:** listing the sample space for an event, finding the probability of simple events, describing the likelihood of simple events  **BWS:** Design: explaining why it is not surprising that we can predict outcomes of simple events |
| 141–42 | 12.2 | 463–67 |  | **Topic:** Theoretical Probability  **Skills:** calculating theoretical probabilities, determining the probability of the complement of an event, predicting the outcome of an experiment using a theoretical probability model |
| 143 | 12.3 | 468–73 | Activities   * Experiment Day!   Additional Materials   * number cubes (1 for each pair of students) * coins (1 for each student) * small, irregularly shaped objects | **Topic:** Experimental Probability  **Skills:** completing a simple experiment, using the results to calculate probabilities, calculating experimental probability using a relative frequency table, comparing experimental and theoretical probabilities and explaining the differences  **BWS:** Design: explaining why experimental outcomes don’t always match theoretical probabilities |
| 144–45 | 12.4 | 474–80 | Activities   * Compound Events * Counting at the Park * Independent vs. Dependent Events | **Topic:** Compound Events  **Skills:** determining sample spaces using tree diagrams, lists, or tables; calculating the number of possible outcomes using the Fundamental Counting Principle; finding the probability of compound events |

Chapter 12: Probability

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 146 | Problem Solving | 490–91 | Instructional Aids   * Instructional Aid 12.PS:  Counting Diagonals   Additional Materials   * colored pencils * highlighters   Assessment   * Quiz 12A (12.1–12.3) |  |
| 147–48 | 12.5 | 481–89 | Additional Materials   * calculators * 3 coins (per group) * 4 number cubes (per group) * a 10-sector and 4-sector spinner (per group) * number cards | **Topic:** Simulations  **Skills:** finding experimental probabilities using a simulation, designing a simulation to model a compound event  **BWS:** Design: analyzing the uncertainty of compound events |
| 149–50 | Chapter 12 Review | 492–93 | Activities   * Chapter 12 Cumulative Review   Teacher Tools Online   * Chapter 12 Mathardy   Assessment   * Quiz 12B (12.4–12.5) |  |
| 151 | Test |  | Assessment   * Chapter 12 Test | |

Chapter 13: Statistics

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 152–53 | 13.1 | 495–503 | Instructional Aids   * Instructional Aid 13.1: Random Survey Methods   Activities   * Survey Project   AfterSchoolHelp.com   * Fundamentals of Math, Statistics | **Topic:** Populations and Samples  **Skills:** identifying biased and unbiased samples, generating multiple samples from one population, predicting the needs of a population using data from a sample  **BWS:** Ethics: creating a project that uses statistics to demonstrate love to others |
| 154–55 | 13.2 | 504–11 | Activities   * Range, Mode, Median, Mean * STEM Project: Service Project   Additional Materials   * calculators * rulers | **Topic:** Descriptive Measures  **Skills:** organizing numerical data using a dot plot or a stem-and-leaf plot; finding the mean, median, mode, and range of a data set; making inferences about two samples by comparing the measures of central tendency |
| 156 | 13.3 | 512–17 |  | **Topic:** Mean Absolute Deviation  **Skills:** finding the mean absolute deviation of  a data set, making inferences about the measures of central tendency and measures of variability |
| 157–58 | 13.4 | 518–26 | Additional Materials   * rulers (optional)   Assessment   * Quiz 13A (13.1–13.3) | **Topic:** Comparing Populations  **Skills:** determining the quartiles and the interquartile range for a data set, representing a data set using a box plot, making inferences about two samples from a population |

Chapter 13: Statistics

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 159–60 | 13.5 | 527–33 | Activities   * Circle Graphs * Using Statistics to Persuade * Bar and Line Graphs * Statistics with Graphs and Diagrams   Additional Materials   * calculators * rulers | **Topic:** Visualizing Data  **Skills:** determining the best type of graph for the given data, identifying characteristics that can change the appearance of a graph, evaluating misleading visual representations of data  **BWS:** Ethics: creating an ethical visual representation to convince others to support your service project |
| 161–62 | Chapter 13 Review | 534–35 | Activities   * Chapter 13 Cumulative Review   Teacher Tools Online   * Chapter 13 Mathardy   Assessment   * Quiz 13B (13.4–13.5) |  |
| 163 | Test |  | Assessment   * Chapter 13 Test | |

Chapter 14: Relations and Functions

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 164 | 14.1 | 537–42 | Activities   * Graphy Duck * Coordinate Plane   Additional Materials   * graph paper (optional)   AfterSchoolHelp.com   * Fundamentals of Math, Relations and Functions | **Topic:** Relations  **Skills:** graphing a set of ordered pairs, representing a relation using a set of ordered pairs |
| 165 | 14.2 | 543–47 | Activities   * Identifying Functions | **Topic:** Functions  **Skills:** determining whether a relation is a function, determining the domain of a function, solving real-world problems using functions  **BWS:** Knowledge: explaining how the concept of functions is a form of naming |
| 166 | 14.3 | 548–53 | Activities   * Function Rules | **Topic:** Function Rules  **Skills:** representing a function given a set of ordered pairs, determining whether an ordered pair satisfies a given function rule, solving real-world problems using function rules |
| 167–68 | 14.4 | 554–58 | Activities   * Graphing Linear Functions * Graphs from Experimental  Ordered Pairs   Additional Materials   * graph paper   Assessment   * Quiz 14A (14.1–14.2) | **Topic:** Graphing Linear Functions  **Skills:** representing a function using a table of values, graphing linear functions, solving real-world problems using graphs of functions |

Chapter 14: Relations and Functions

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| Day | Section | Pages | Teacher Resources | Skills / Biblical Worldview Shaping (BWS) |
| 169 | 14.5 | 559–65 | Additional Materials   * graph paper | **Topic:** Slope  **Skills:** determining the slope of a line, graphing a line given the slope and a point on the line, solving real-world problems using the rate of change  **BWS:** Knowledge: explaining how naming relates to the Creation Mandate |
| 170 | Problem Solving | 566–67 | Activities   * Using Graphs to Predict   Assessment   * Quiz 14B (14.3–14.4) |  |
| 171–72 | 14.6 (Examples 4–5 are optional.) | 568–73 | Activities   * Formulas for Figurate Number Patterns   Additional Materials   * graph paper | **Topic:** Sequences  **Skills:** identifying patterns in sequences of numbers, finding missing terms in a sequence of numbers |
| 173–74 | Chapter 14 Review | 574–75 | Teacher Tools Online   * Chapter 14 Mathardy   Assessment   * Quiz 14C (14.5–14.6) |  |
| 175 | Test |  | Assessment   * Chapter 14 Test | |
| 176–80 | Review and Test |  | Activities   * Chapter 14 Cumulative Review   Assessment   * 4th Quarter Exam | |