Lesson Plan Overview
Fundamentals of Math 3ʳᵈ Edition

Chapter 1: Whole Numbers & Decimals

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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	