**8th Grade**

**Scope & Sequence**

**Unit 1: Rational Number Operations (11 days)**

* Add & Subtract Integers
* Add & Subtract Rational Numbers
* Multiply & Divide Integers
* Multiply Rational Numbers
* Divide Rational Numbers
* Order of Operations

**Unit 2: Proportion & Percent (13 days)**

* Proportions
* Similar Figures
* Indirect Measurement
* Fractions, Decimals, & Percent
* Compare & Order Rational Numbers
* Percent Proportion
* Percent of Change
* Discount, Markup, Tax, & Tip
* Simple Interest (& Compound Interest)

**Unit 3: Powers & Roots (14 days)**

* Powers & Exponents
* Zero & Negative Exponents
* Multiplying Monomials
* Dividing Monomials
* Powers of Monomials
* Review of all Exponent Rules
* Scientific Notation
* Computations with Scientific Notation
* Square Roots & Cube Roots
* Estimating Roots

**Unit 4: Algebraic Expressions (11 days)**

* Expression Vocabulary & Evaluating Expressions
* Writing Expressions
* Real Number System
* Properties of Real Numbers
* Distributive Property
* Combining Like Terms
* Simplifying Algebraic Expressions

**Unit 5: Equations (13 days)**

* Addition & Subtraction Equations
* Multiplication & Division Equations
* 2-Step Equations
* Variables on Both Sides
* Multi-Step Equations
* Writing Equations
* Equation Applications

**Unit 6: Inequalities (9 days)**

* Inequality Basics & Graphing Inequalities
* Addition & Subtraction Inequalities
* Multiplication & Division Inequalities
* 2-Step Inequalities
* Multi-Step Inequalities
* Inequality Applications

**Unit 7: Relations & Functions (10 days)**

* Ordered Pairs & Relations
* Functions, Domain, & Range
* Function Notation
* Writing Function Rules
* Graphing from Tables
* Arithmetic Sequences

**Unit 8: Linear Functions (11 days)**

* Rate of Change
* Slope
* Direct Variation
* Slope-Intercept Form
* Solving Systems of Equations by Graphing
* Scatterplots

**Unit 9: Angles & Polygons (14 days)**

* Basic Geometry Vocabulary
* Measuring & Classifying Angles
* Complementary & Supplementary Angles
* Angle/Line Relationships
* Triangles
* Quadrilaterals
* Polygons
* Angles in Polygons
* Translations, Reflections, & Rotations
* Dilations

**Unit 10: Trigonometry & Geometry (15 days)**

* Pythagorean Theorem
* Trigonometric Ratios
* Solving Right Triangles
* Area & Perimeter of 2-D figures
* Area & Perimeter of composite figures
* 3-D figures
* Volume & Surface Area of Prisms & Cylinders
* Volume & Surface Area of Pyramids, Cones, & Spheres

**Unit 11: Measurement (7 days)**

* Metric System
* Customary System
* Unit Analysis

**Unit 12: Statistics & Probability (12 days)**

* Measures of Central Tendency
* Box & Whisker Plots
* Counting Outcomes
* Permutations
* Combinations
* Probability of Compound Events
* Theoretical vs. Experimental Probability

**Unit 13: Polynomials (9 days)**

* Classifying & Simplifying Polynomials
* Adding Polynomials
* Subtracting Polynomials
* Multiplying Polynomials