

# All Things Algebra®

# MATH 6 CURRICULUM

## Unit 1: Whole Numbers

- Place Value Review
- Whole Number Operations
- Divisibility Rules
- Powers and Exponents; Powers of 10
- Perfect Squares
- Order of Operations
- Prime Factorization
- Great Common Factor
- Least Common Multiple

## Unit 2: Integers

- Representing & Writing Integers
- Comparing and Ordering Integers
- Absolute Value
- Adding Integers
- Subtracting Integers
- Multiplying Integers
- Dividing Integers
- Order of Operations with Integers
- The Coordinate Plane: Identify & Label Axes, Origin, Quadrants.
- Graph Ordered Pairs with Integral Coordinates

## Unit 3: Rational Numbers

- Writing Fractions (Mixed vs. Improper)
- Equivalent Fractions
- Adding and Subtracting Fractions
- Multiplying Fractions
- Dividing Fractions
- Decimals & Place Value
- Adding & Subtracting Decimals
- Multiplying Decimals
- Dividing Decimals
- Fraction, Decimals, and Percents
- Percent of a Number
- Negative Rational Numbers
- Comparing & Ordering Rational Numbers

## Unit 4: Algebraic Expressions

- Algebraic Expressions (Variables, Coefficients, Constants)
- Evaluating Expressions
- Writing Expressions
- Equivalent Expressions
- Properties: Commutative, Associative, Identity
- Distributive Property
- Combining Like Terms
- Simplifying Expressions (Distribute and Combine)
- Factoring Expressions

### Unit 5: Equations & Inequalities

- Writing Equations in One Variable
- Properties of Equality
- Solving Equations with Addition or Subtraction (Whole Numbers, Rational Numbers, & Integers)
- Solving Equations with Multiplication or Division (Whole Numbers, Rational Numbers, & Integers)
- Writing & Graphing Inequalities
- Identifying Solutions to an Inequality
- Properties of Inequality
- Solving Inequalities with Addition or Subtraction (Whole Numbers & Integers)
- Solving Inequalities with Multiplication or Division (Whole Numbers & Integers)

### Unit 6: Ratio & Proportion

- Ratios
- Equivalent Ratios
- Unit Rates
- Determine if a Proportional Relationship Exists (Given Verbal Descriptions, Tables, Graphs)
- Write a Proportional Relationships (Given Verbal Descriptions, Tables, Graph, Unit Rate)
- Graph Proportional Relationships
- Represent Ratios as Fractions, Decimals, and Percents
- Comparing & Order Fractions, Decimals, and Percents

### Unit 7: Area & Volume

- Identify Regular Polygons
- Area & Perimeter of Rectangles, Triangles, Parallelograms, and Trapezoids
- Congruent Polygons
- Lines of Symmetry
- Polygons in the Coordinate Plane
- Area of Composite Figures
- Area of Circles
- Circumference of Circles
- Three-Dimensional Figures
- Surface Area of Prisms (with nets)
- Surface Area of Pyramids (with nets)
- Volume of Rectangular Prisms

### Unit 8: Statistics

- Measures of Center: Mean, Median, and Mode
- Effects on the Measure of Center (Outliers, adding, or removing data values)
- Range, Quartiles, Interquartile Range
- Mean Absolute Deviation
- Stem-and-Leaf Plots
- Histograms
- Shapes of Distributions
- Box-and-Whisker Plots
- Circle Graphs