

Grade 6 Mathematics delivers instruction, practice, and review designed to develop computational fluency, deepen conceptual understanding, and apply mathematical practices. Course topics include ratios and rates, fraction and decimal operations, and signed numbers. Students continue to build their algebra skills by plotting points in all four quadrants of the coordinate plane and solving equations and inequalities. Geometry topics include area, surface area, and volume, and statistical work features measures of center and variability, box plots, dot plots, and histograms.

The two-semester course is arranged in themed units, each with three to five lessons. Each lesson includes a variety of activities such as direct instruction, application of skills, performance tasks, and formative and summative assessments. Students engage with the subject matter in an interactive, feedback-rich environment as they progress through standards-aligned content and demonstrate their learning through computer- and teacher-scored assignments. By constantly honing the ability to apply their knowledge in abstract and real-world scenarios, students build the depth of knowledge and higher-order skills required to demonstrate their mastery when put to the test.

This course is built to state standards.

Length: Two Semesters

Unit 1: Number Sense

- Decimal Operations
- Greatest Common Factor and Least Common Multiple
- Fraction Multiplication and Division
- Solving Problems with Fractions
- Rewriting and Comparing Fractions, Decimals, and Percents
- Wrap-Up: Number Sense

Unit 2: Integers

- Integers
- Inequalities and Comparison
- Absolute Value
- Wrap-Up: Integers

Unit 3: Operations with Integers

- Adding Integers
- Subtracting Integers
- Multiplying and Dividing Integers
- Expressions with Integers
- Wrap-Up: Operations with Integers

Unit 4: The Coordinate Plane

- Plotting Points on the Coordinate Plane
- Quadrants and Axes

- Using Graphs to Solve Problems
- Wrap-Up: The Coordinate Plane

Unit 5: Ratios and Unit Rates

- Ratios
- Rates and Unit Rates
- Solving Percent Problems
- Unit Conversions
- Wrap-Up: Ratios and Unit Rates

Unit 6: Semester Wrap-Up**Unit 7: Numerical and Algebraic Expressions**

- Exponents
- Writing Expressions
- Evaluating Expressions
- Equivalent Expressions
- Wrap-Up: Numerical and Algebraic Expressions

Unit 8: Equations and Inequalities

- Solutions of Equations and Inequalities
- Solving Equations Using Addition and Subtraction
- Solving Equations Using Multiplication and Division
- Writing and Graphing Inequalities
- Wrap-Up: Equations and Inequalities

Unit 9: Geometry

- Area
- Volume
- Coordinate Geometry
- Surface Area
- Wrap-Up: Geometry

Unit 10: Introduction to Data Analysis

- Statistical Questions and Data Distributions
- Collecting Data
- Measures of Center
- Wrap-Up: Introduction to Data Analysis

Unit 11: Displaying and Analyzing Data

- Box Plots
- Line Plots and Histograms
- Analyzing Data
- Wrap-Up: Displaying and Analyzing Data

Unit 12: Semester 2 Exam