

Mathematics Curriculum Guide

Grades 3 – 6

East Ramapo Central School District

Curriculum: Eureka Math² New York Next Generation

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Grade 3

Grade 4

Grade 5

Grade 6

This guide provides an overview of the six learning modules your child will experience during the school year. Each module builds on the last, developing a deep and lasting understanding of mathematics.

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Grade 6 Mathematics

A Story of Ratios and Rates

Grade 6 marks a pivotal transition from arithmetic to algebraic thinking. Students encounter entirely new concepts — ratios, rates, and percents — alongside rational numbers and their first formal work with expressions and equations. Geometry grows more sophisticated, with area formulas for triangles and other polygons, surface area, and volume. A rich focus on statistics teaches students to ask questions, collect data, and interpret results — skills they will use throughout their lives.

What Your Child Will Learn This Year — Six Modules

Module 1

Ratios, Rates, and Percents

Students are introduced to the concept of a ratio — a comparison of two quantities. They explore equivalent ratios using tape diagrams, ratio tables, and double number lines, and graph ratio relationships in the coordinate plane. They then develop unit rates, explore rate problems in real-world contexts, and connect ratios to percents — building the proportional reasoning that is essential for all future math.

Key Concepts: Ratios and equivalent ratios • Unit rates and rate problems • Representing ratios graphically • Percents as special ratios

Module 2

Operations with Fractions and Multi-Digit Numbers

Students complete their work with fraction operations, focusing on division of fractions by fractions — a concept that ties together years of fraction understanding. They also revisit factors, multiples, and divisibility, and work with multi-digit numbers using the standard algorithms. These skills support the algebraic and ratio reasoning developed throughout the year.

Key Concepts: Dividing fractions by fractions • Greatest common factor and least common multiple • Multi-digit number operations • Applying fraction division in context

Module 3

Rational Numbers

Students extend the number line to include negative numbers — integers and rational numbers. They plot positive and negative numbers on horizontal and vertical number lines, compare and order rational numbers, and explore absolute value. Students also work with the coordinate plane across all four quadrants, connecting rational numbers to real-world situations like temperature, elevation, and finance.

Key Concepts: Positive and negative numbers • Integers and rational numbers on the number line • Comparing, ordering, and absolute value • The four-quadrant coordinate plane

Module 4

Expressions and One-Step Equations

Students make a major shift toward algebraic thinking. They write and evaluate numerical and algebraic expressions, use variables to represent unknown quantities, and explore the order of operations. They write and solve one-step equations and inequalities using reasoning and inverse operations, and apply these skills to real-world problems — including geometry formulas for area and perimeter.

Key Concepts: Writing and evaluating expressions with variables • Order of operations • Solving one-step equations • Applying algebra to geometry formulas

Module 5

Area, Surface Area, and Volume

Students tackle more complex geometric figures. They derive and apply formulas for the area of parallelograms, triangles, and other polygons by composing and decomposing shapes. They then explore three-dimensional figures — identifying nets (flat unfolded versions of 3D shapes) and using them to find surface area. Volume of rectangular prisms with fractional side lengths connects geometry to fraction multiplication.

Key Concepts: Area of triangles and polygons • Nets and surface area of 3D figures • Volume with fractional dimensions • Applying formulas in context

Module 6

Statistics

In this final module, students are introduced to formal statistical reasoning. They learn to pose statistical questions, collect data, and display it using dot plots, histograms, and box plots. They explore measures of center (mean, median, mode) and measures of spread (range, mean absolute deviation), and interpret these in context. Students develop the ability to describe, summarize, and draw conclusions from data distributions.

Key Concepts: Asking statistical questions • Dot plots, histograms, and box plots • Measures of center: mean, median, mode • Describing data distributions