

## Fifth-Grade Math Curriculum

The students will primarily use *Fifth-Grade Eureka Math: Great Minds* and supplemental resources to build fact fluency and logic, such as *Tang Math* and *Reflex Math*. The fifth-grade math objectives are developing whole-number, fraction, and decimal arithmetic fluency and reasoning and multi-step problem solving, which will help students complete pre-algebra in later years. Therefore, fifth-grade math builds foundational skills and math logic. The following skills are covered in *Eureka Math*:

- Place value:
  - Moving whole numbers and decimals by powers of ten
  - Introduction to exponents
  - Writing numbers in words
  - Writing decimals in expanded form using exponents (example:  $\# \times 10^{\#}$ ) and unit fractions (example:  $\# \times \frac{\#}{10}$ , etc.)
  - Understanding and modeling fraction place value using number lines or models
  - Comparing numbers using  $<$ ,  $>$ ,  $=$
  - Rounding
- Decimal arithmetic:
  - Adding and subtracting decimals
  - Single, double, and then multi-digit multiplication and division with whole numbers and decimals
- Fraction arithmetic:
  - Equivalent fractions
  - Decomposing fractions (example:  $3/8 = 1/8 + 2/8$ )
  - Comparing fractions and mixed numbers
  - Converting mixed numbers into improper fractions and vice versa
  - Adding and subtracting fractions with like and unlike denominators
  - Adding and subtracting mixed numbers with like and unlike denominators
  - Interpreting fractions as division problems
  - Multiplying fractions
  - Dividing fractions
  - Introduction to scaling (example: the model is  $\frac{1}{2}$  the size of the original)
  - Convert fractions to decimals and decimals to fractions
- Unit conversion, comparison, and arithmetic
  - Metric unit conversions using powers of ten
  - Converting units using decimal multiplication
  - Converting smaller units into fractions of a larger unit (example: 6 inches =  $\frac{1}{2}$  foot)
  - Adding as subtracting numbers with unlike units (example: L – mL)
  - Measuring using different units and observing how unit size impacts the accuracy of measurement
  - Measuring with square or cubic units including *mL* and *cm<sup>2</sup>*
- Adding and multiplying with volume and area

- Introduction to diagramming and calculating area and volume (rectangles and rectangular prisms)
- Diagramming and calculating the area and volume of complex figures made of several rectangles or rectangular prisms with irregular side lengths such as fractions
- Introduction to surface area and nets
- Introduction to coordinate planes
  - Locating point and graphing on a number line
  - Locating points and graphing on a coordinate plane using ordered pairs
  - Introduction to rules (functions) and patterns such as lines on a coordinate plane
- Multi-step problem solving and logic
  - Introduction to using parenthesis in multi-step operations, the associative property, and the distributive property
  - Practice solving multi-step word problems
  - Practice writing word problems to fit a mathematical expression
  - Use estimation and math logic to test if an answer is reasonable
  - Using models and illustrations to help solve complex word problems.