Scope and Sequence: Fifth Grade

What Students Learn in Fifth Grade Mathematics
In fifth grade, some clusters of standards require a greater instructional emphasis than the others based on the depth of the ideas, the time that they take to master, and/or their importance. The bulk of instructional time in fifth grade is devoted to "Major" clusters" (units 1-6) and standards within them. To start the school year, fifth grade students will develop fluency with whole number operations by multiplying multi-digit whole numbers using the standard algorithm. The most important goal here is for students to understand the standard algorithm in terms of place value. This unit also includes division and simplifying numerical expressions. Then students will develop an understanding of volume and relate volume to multiplication and addition. Because a critical area of instruction is developing fluency with addition and subtraction of fractions, students will extend work with fractions to add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions with like denominators. Students will continue their work with fractions by multiplying and dividing fractions by fractions. Here they will apply and extend previous understandings of multiplication to multiply two fractions or whole numbers by a fraction. A new concept in fifth grade is dividing unit fractions by whole numbers and whole numbers by unit fractions. Other critical areas of instruction in fifth grade include integrating decimal fractions into the place-value system, developing an understanding of operations with decimals to hundredths, and working toward fluency with decimal operations. Students will be introduced to the use of two perpendicular number lines to define a coordinate system (focusing on the first quadrant), along with beginning an understanding of the structure of the coordinate system. At the end of the year, students will develop an understanding of reasoning about the attributes *(properties)* of two-dimensional shapes and to classify these shapes in a hierarchy based on properties.

Unit Numbers and Titles		Grade 5 Students…
Tri 1	Whole Number Expressions and Operations	**Should master:** • Multiplying multi-digit whole numbers using an algorithm • Adding, Subtracting and Multiplying fractions • Place Value with whole numbers and decimals to the thousandths place
Tri 1	Volume	• Volume of rectangular prisms **Work towards fluency in:**
Tri 2	Addition and Subtraction of Fractions	• Division of whole numbers by 2-digit divisors • Add, subtract, multiply, and divide decimals to the hundredths place
Tri 2	Multiplication and Division of Fractions	• Dividing unit fractions by whole numbers and whole numbers by unit fractions **Are introduced to:**
Tri 3	Place Value and Decimals	• The coordinate plane and graphing ordered pairs in the first quadrant • Rounding decimals
Tri 3	Decimal Operations	• Writing simple expressions and simplifying them with parentheses, brackets, or braces
Tri 3	Graphing on the Coordinate Plane	• Classification of 2 dimensional figures in hierarchy based on properties
Tri 3	Classifying Two-Dimensional Polygons	• Unit conversions