## 5th Grade Math Concepts by Quarter

This serves as a general sequence of math concepts for the school year. The concepts within a quarter are grouped by domain and may not be listed in the order they are taught. There may be slight variability across the district in order to meet specific needs of students.

## 1st Quarter

## Numbers in Base Ten

- Understand that in a multi-digit number the digit to the left is 10 times larger and the digit to the right is 10 times smaller
- Explain patterns when multiplying or dividing by powers of 10; use whole number exponents to denote powers of 10
- Read, write, and compare decimals to the thousandths place
- Use place value to round decimals to any place
- Fluently multiply multi-digit whole numbers with efficient algorithm
- Divide whole numbers up to 4-digit by 2-digit using strategies based on place value


## Measurement and Data

- Recognize volume as an attribute of solid figures and understand concepts of volume measurement.
- Measure volume by counting unit cubes (ie: cubic cm)
- Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume


## 2nd Quarter

## Numbers in Base Ten

- Add, subtract, multiply, and divide decimals to hundredths using strategies based on place value


## Numbers and Operations - Fractions

- Add and subtract fractions with unlike denominators, including mixed numbers
- Solve word problems involving adding and subtracting fractions referring to the same whole, including with unlike denominators


## 3rd Quarter

## Numbers and Operations - Fractions

- Multiply a fraction or whole number by a fraction
- Interpret multiplication as scaling (resizing)
- Solve real world problems involving multiplication of fractions or mixed numbers
- Divide unit fractions by whole numbers and whole numbers by unit fractions
- Interpret a fraction as the division of the numerator by the denominator; solve word problems with division of whole numbers leading to answers in the form of fractions or mixed numbers


## Measurement and Data

- Convert among standard units of measure and use these conversions in mutl-step, real world problems
- Make a data display (graph) to show a data set of measurements in fractions of a unit


## 4th Quarter

## Operations and Algebraic Thinking

- Use parentheses in equations and evaluate equations containing parentheses
- Write simple expressions and interpret expressions


## Geometry

- Create a coordinate plane and plot points on the plane
- Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points
- Understanding attributes of categories and subcategories of two-dimensional figures
- Classify two-dimensional figures in a hierarchy based on properties

For more information visit KSDE Parent Guide to the Standards

