Southfield Public Schools

5th Grade Mathematics

Course Overview

Students actively engage in a problem –solving approach based on everyday situations that develops critical thinking. Mathematics communication includes understanding and evaluating the mathematical thinking and strategies of others. Frequent practice of basic skills occurs through ongoing program routines and mathematical games. Activities that explore a wide variety of mathematical content offer opportunities for students to apply their knowledge.

Fifth grade mathematics emphasizes the following content strands:

- **Number and Operations** –Reading, writing, and comparing negative numbers, fractions, whole numbers through billions, and decimals through thousandths; reading writing, and interpreting whole-number powers of 10; translating between exponential and standard notation; understanding and identifying prime numbers, composite numbers, and square numbers. Compute, estimate and round multidigit whole numbers and decimals from billions to hundredths; translating among fractions, decimals and percents; prime factoring; converting between fractions and mixed numbers; compute fractions and mixed numbers with unlike denominators.
- **Measurement**-Measuring and estimating length, area, volume, weight, and capacity; converting and computing with common units of measure; creating scale drawings; solving perimeter, area, and volume problems.
- **Geometry**-Constructing a circle with a given radius or diameter; defining and creating tessellations; measuring, drawing, identifying and defining polygons; plotting points in four quadrants; graphing ordered pairs; using translations, reflections and rotations; identifying angle relationships in triangles and in quadrilaterals.
- **Data & Probability**-Drawing justifiable conclusions from data in more than one way; formulating a question; carrying out a survey or experiment; recording data and communicating results; drawing and interpreting circle graphs and stem and leaf plots; mean, median and mode.

Unit Titles

Number Theory
Estimation & Computation
Geometry Explorations in the American Tour
Division
Fractions, Decimals & Percents
Using Data; Addition and Subtraction of Fractions
Exponents and Negative Numbers
Fractions and Ratios
Coordinates, Area, Volume and Capacity
Algebra Concepts and Skills
Volume
Probability, Ratios and Rates