

Fifth Grade Math Curricula

The fifth grade Mathematics Curriculum focuses on five process strands: problem solving, reasoning and proof, mathematical communication, connections, and representations. Interweaved into these process strands are five content strands: number sense and operations, algebra, geometry, measurement, and statistics and probability. The entwining of these content strands and process strands will allow our children to become mathematically proficient in conceptual understanding, procedural fluency and problem solving. Our district's Mathematics Curriculum has been aligned with the revised New York State Standards for Mathematics. <http://www.emsc.nysed.gov>

CONTENT STRANDS

Number Sense and Operations

- Read and write numerals for whole numbers up to one million
- Understand place value-whole numbers and decimals up to 1,000ths
- Determine what information is needed to solve problems
- Work with fractions-equivalent, simplify to lowest terms, proper, improper and mixed numbers, additions and subtraction with like denominators and multiplication
- Recognize greatest common factors and least common multiple
- Compare and order whole numbers, decimals and fractions
- Use conventional rule for order of operation
- Understand that percent means part of 100, and write percents as fractions and decimals
- Recognize some numbers are only divisible by one and themselves (prime) and others have multiple divisors (composite)
- Identify the factors and multiples of a given number

Algebra

- Define and use appropriate terminology when referring to constants, variables, and algebraic expressions
- Translate simple verbal expressions into algebraic expressions
- Substitute assigned values into variable expressions and evaluate using order of operations
- Solve simple one-step equations using basic whole-number facts
- Evaluate the perimeter formula for given input values
- Create and explain patterns and algebraic relationships algebraically; doubling
- Create algebraic or geometric patterns using concrete objects or visual drawings

Geometry

- Explore relationships involving points, lines, angles, and planes
- Calculate the perimeter of regular and irregular polygons
- Explore triangle and their attributes
- Classify quadrilaterals by properties of their angles and sides
- Find a missing angle when given two angles of a triangle

- Identify and plot points in the first quadrant
- Plot points to form basic geometric shapes
- Calculate perimeter of basic geometric shapes drawn on a coordinate plane

Measurement

- Read, interpret and construct line, and bar graphs, and draw conclusions from pictographs, tables and charts
- Measure length, distance, weight, volume, capacity, perimeter, area and temperature
- Use a ruler to measure to the nearest inch and fraction
- Identify customary equivalent units of length
- Identify equivalent metric units of length
- Measure to the nearest centimeter
- Convert measurement within a given system
- Calculate elapsed time in hours and minutes
- Measure and draw angles using a protractor
- Determine personal references for customary units of length
- Determine personal references for metric units of length

Statistics and Probability

- Round numbers to the nearest hundredth and up to 10,000
- Estimate sums and differences of fractions with like denominators
- Estimate sums, differences, products and quotients of decimals
- List the possible outcomes for a single-event experiment
- Record experiment results using fractions/ratios
- Create a sample space and determine the probability of a single event, given a simple experiment