

6th Grade Math

1st Quarter

The students may study the following topics:

- multiple intelligence and learning styles (*all year*)
- problem solving (*all year*)
- understanding and estimating with whole numbers and decimals
- properties of numbers and order of operations
- comparing and ordering decimals
- adding, subtracting, multiplying, and dividing decimals
- divisibility and mental math
- exponents
- prime numbers, prime factorization, greatest common factor, and least common multiple
- mixed number and improper fractions
- comparing and ordering fractions and non-negative rational numbers
- estimating sums and differences
- adding and subtracting fractions with like and unlike denominators
- adding and subtracting mixed numbers
- measuring elapsed time

2nd Quarter

The students may study the following topics:

- multiplying fractions and mixed numbers
- dividing fractions and mixed numbers
- describing patterns
- variables and expressions
- writing algebraic expressions that solve everyday problems
- solving one-step addition, subtractions, division, and multiplication equations with number sense and inverse operation with both whole numbers and fractions
- using the distributive property to solve problems with mental math

3rd Quarter

The students may study the following topics:

- understanding ratios and proportions
- finding unit rates and solving proportions
- using proportions to make scale drawings
- understanding percents, fractions, and decimals as amounts
- finding the percent of a number
- using percents to make circle graphs
- estimating with percents
- finding the mean, median, and mode and discovering their uses
- exploring various means of graphing data: frequency table, line plot, bar graph, line graph, and stem and leaf plot
- organizing data: spreadsheets

- recognizing misleading graphs and statistics
- independent student data organization and display project
- tree diagram and the counting principle
- probability and experimental probability
- making predictions from data
- independent events

4th Quarter

The students may study the following topics:

- points, lines, segments, rays
- angles, special pairs of angles, and basic constructions
- exploring and classifying triangles and other polygons
- congruent and similar figures
- line symmetry and transformations
- exploring integers, opposites, and absolute value
- comparing and ordering positive and negative integers
- adding, subtractions, multiplying, and dividing positive and negative integers
- solving equations with positive and negative integers
- graphing in the coordinate plane and graphing functions
- applications of integers in profit and loss situations
- metric units of length, mass, and capacity
- converting units in the metric system
- perimeters and areas of rectangles
- areas of parallelograms and triangles
- circles: circumference and area
- surface area of prisms and cylinders
- volume of rectangular prisms and cylinders

As time permits

- solving two-step equations
- inequalities and solving one-step inequalities
- exploring square roots and rational numbers
- introducing the Pythagorean Theorem

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