



Curriculum Overview

Subject: Mathematics

Grade: 6

By the end of the year, you can expect your child to:

- Understand ratio concepts and use ratio and rate reasoning to solve real-world and mathematical problems
- Make a table of equivalent ratios relating quantities with whole-number measurements
- Understand and solve unit rate problems including those involving unit pricing and constant rate
- Find a percent of a quantity as a rate per 100 and solve problems involving finding the whole, given a part or the percent
- Use ratio reasoning to convert measurement units
- Compute, interpret quotients of fractions and solve word problems involving division of fractions
- Fluently divide using the standard algorithm and create a story context for division
- Fluently add, subtract, multiply and divide multi-digit decimals using the standard algorithm
- Find the greatest common factor of two whole numbers less than or equal to 100
- Find the least common multiple of two whole numbers less than or equal to 12
- Use positive and negative numbers to represent quantities in real-world contexts
- Explain the meaning of 0 in situations using positive and negative numbers
- Extend number-line diagrams and coordinate axes to represent points on the line and in the plane with negative number coordinates
- Find and position integers and other rational numbers on a horizontal or vertical number line diagram and on a coordinate plane
- Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram

- Write, interpret and explain statements of order for rational numbers in real-world contexts
- Understand ordering and absolute value of rational numbers
- Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane
- Write and evaluate numerical expressions involving whole-number exponents
- Read, write and evaluate expressions in which letters stand for numbers
- Write expressions that record operations with numbers and with letters standing for numbers
- Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient);
- Evaluate expressions at specific values of their variables including expressions that arise from formulas used in real-world problems
- Apply the properties of operations to generate equivalent expressions and identify when two expressions are equivalent
- Reason about and solve one-variable equations and inequalities
- Use variables to represent numbers and to write expressions when solving real-world or mathematical problems
- Represent and analyze quantitative relationships between dependent and independent variables
- Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation
- Use the equation of a relationship between two dependent and independent variables to predict ordered pairs that are not displaced in a given graph or table
- Solve real-world and mathematical problems involving area, surface area and volume
- Represent and find the surface area of a 3-D figure by finding the total area of its 2-D net
- Develop understanding of statistical variability
- Display numerical data in plots on a number line including dot plots, histograms and box plots
- Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape
- Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number