

Expectations and Outcomes

Grade Level/Course: Sixth Grade

Content Area: Math

| Unit Title | Guarantees |
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| Unit 1: Numerical Expressions and Factors | <ul style="list-style-type: none"> • Fluently divide multi-digit numbers using the standard algorithm • Write and evaluate numerical expressions involving whole-number exponents. • Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. |
| Unit 2: Fractions and Decimals | <ul style="list-style-type: none"> • Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions. • Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. |
| Unit 3: Algebraic Expressions and Properties | <ul style="list-style-type: none"> • Write, read, and evaluate expressions in which letters stand for numbers. Write expressions that record operations with numbers and with letters standing for numbers. • Apply the properties of operations to generate equivalent expressions. • Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. |
| Unit 4: Areas of Polygons | <ul style="list-style-type: none"> • Find the area of . . . Special quadrilaterals . . . By composing into rectangles . . .; apply these techniques in the context of solving real-world and mathematical problems. • Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems. |
| Unit 5: Ratios and Rates | <ul style="list-style-type: none"> • Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. • Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables. Use tables to compare ratios. • Understand the concept of a unit rate a/b associated with a ratio $a : b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. |

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| | <ul style="list-style-type: none"> • Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. |
| Unit 6: Integers and the Coordinate Plane | <ul style="list-style-type: none"> • Understand that positive and negative numbers are used together to describe quantities having opposite directions or values. • Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. • Understand the absolute value of a rational number as its distance from 0 on the number line. • Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane. |
| Unit 7: Equations and Inequalities | <ul style="list-style-type: none"> • Understand solving an equation as a process of answering a question: which values from a specified set, if any, make the equation true? Use substitution. • Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions... |
| Unit 8: Surface Area and Volume | <ul style="list-style-type: none"> • Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems. • Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $v = \ell wh$ and $v = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems. |
| Unit 9: Statistical Measures | <ul style="list-style-type: none"> • Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. • Display numerical data in plots on a number line, including dot plots. |

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| | <ul style="list-style-type: none"> • Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center • Summarize numerical data sets in relation to their context, such as by giving quantitative measures of center (. . . Mean) . . . , as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. |
| Unit 10: Data Displays | <ul style="list-style-type: none"> • 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. |