$6^{\text {th }}$ Grade Level Math Map

| Unit Title | Standards |
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|  | First Semester |
| Unit 1 <br> Number Systems | 6.NS. 1 Compute and represent quotients of positive fractions using a variety of procedures (e.g., visual models, equations, and real-world situations). <br> 6.NS.2 Fluently divide multi-digit whole numbers using a standard algorithmic approach. <br> 6.NS. 3 Fluently add, subtract, multiply and divide multi-digit decimal numbers using a standard algorithmic approach. <br> 6.NS. 4 Find common factors and multiples using two whole numbers. <br> a. Compute the greatest common factor (GCF) of two numbers both less than or equal to 100 . <br> b. Compute the least common multiple (LCM) of two numbers both less than or equal to 12 . <br> c. Express sums of two whole numbers, each less than or equal to 100, using the distributive property to factor out a common factor of the original addends. <br> 6.NS. 5 Understand that the positive and negative representations of a number are opposites in direction and value. Use integers to represent quantities in real-world situations and explain the meaning of zero in each situation. <br> 6.NS. 6 Extend the understanding of the number line to include all rational numbers and apply this concept to the coordinate plane. <br> a. Understand the concept of opposite numbers, including zero, and their relative locations on the number line. <br> b. Understand that the signs of the coordinates in ordered pairs indicate their location on an axis or in a quadrant on the coordinate plane. <br> c. Recognize when ordered pairs are reflections of each other on the coordinate plane across one axis, both axes, or the origin. <br> d. Plot rational numbers on number lines and ordered pairs on coordinate planes. <br> 6.NS. 7 Understand and apply the concepts of comparing, ordering, and finding absolute value to rational numbers. |

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|  | 6.RP.3 Apply the concepts of ratios and rates to solve real-world and mathematical problems. <br> a. Create a table consisting of equivalent ratios and plot the results on the coordinate plane. <br> b. Use multiple representations, including tape diagrams, tables, double number lines, and equations, to find missing <br> values of equivalent ratios. <br> c. Use two tables to compare related ratios. <br> d. Apply concepts of unit rate to solve problems, including unit pricing and constant speed. <br> e. Understand that a percentage is a rate per 100 and use this to solve problems involving wholes, parts, and <br> percentages. |
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| f. Solve one-step problems involving ratios and unit rates (e.g., dimensional analysis). |  |

## Unit 3

Expressions,
Equations,
and
Inequalities

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|  | 6.EEI. 4 Apply mathematical properties (e.g., commutative, associative, distributive) to justify that two expressions are equivalent. <br> 6.EEI. 5 Understand that if any solutions exist, the solution set for an equation or inequality consists of values that make the equation or inequality true. <br> 6.EEI. 6 Write expressions using variables to represent quantities in real-world and mathematical situations. Understand the meaning of the variable in the context of the situation. <br> 6.EEI. 7 Write and solve one-step linear equations in one variable involving nonnegative rational numbers for real-world and mathematical situations. <br> 6.EEI. 8 Extend knowledge of inequalities used to compare numerical expressions to include algebraic expressions in realworld and mathematical situations. <br> a. Write an inequality of the form $>$ or $<$ and graph the solution set on a number line. <br> b. Recognize that inequalities have infinitely many solutions. <br> 6.EEI. 9 Investigate multiple representations of relationships in real-world and mathematical situations. <br> a. Write an equation that models a relationship between independent and dependent variables. <br> b. Analyze the relationship between independent and dependent variables using graphs and tables. <br> c. Translate among graphs, tables, and equations. |
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| Unit 4 <br> Geometry \& Measurement | 6.GM. 1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems. <br> 6.GM. 2 Use visual models (e.g., model by packing) to discover that the formulas for the volume of a right rectangular prism ( $V=/ w h, V=B h$ ) are the same for whole or fractional edge lengths. Apply these formulas to solve real-world and mathematical problems. <br> 6.GM.3 Apply the concepts of polygons and the coordinate plane to real-world and mathematical situations. |

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a. Given coordinates of the vertices, draw a polygon in the coordinate plane.
b. Find the length of an edge if the vertices have the same $x$

