

Middle School Math Curriculum Map 2021-2022

| Month(s) | Topic/Theme/Chapter /Unit | Essential Questions | Common Core and/or State Standard | SLE | Assessments (Formative & Summative - Varying Types) PBL projects will be added throughout the year. |
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| September/ October | <p>Create a notebook table of contents to help with a quick review, date title page</p> <p>Pre-Assessment</p> <p>2 Week Review of 5th Grade Mastered Material</p> <ul style="list-style-type: none"> • Adding, subtracting, multiplying, and dividing fractions • Place Value and Metric Measurement <p>Unit 1: Ratios and Proportional Relationships</p> <p>Ch. 1: Ratios and Rates</p> <p>Ch. 2: Fractions, Decimals, and Percents</p> | <p>Unit 1: How can you use mathematics to describe change and model real-world situations?</p> <p>Ch. 1: How do you use equivalent rates in the real world?</p> <p>Ch. 2: When is it better to use a fraction, a decimal, or a percent?</p> | <p>6.RP.1: Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.</p> <p>6.RP.2: 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.</p> <p>6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.</p> <p>6.RP.3a: Make tables of equivalent ratios</p> <p>6.RP.3b: Solve unit rate problems including those involving unit pricing and constant speed.</p> <p>6.RP.3c: Find a percent of a quantity as a rate per 100</p> <p>6.NS.4: 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. 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.</p> | <p>2a, 2b, 2c, 2d, 2e, 2f</p> <p>3a, 3c, 3e, 3f</p> | <p>Exit Tickets</p> <p>Unit Vocabulary</p> <p>Word Problems/Problem Solving</p> <p>Friday Math Stations</p> <p>Inquiry Labs/ Unit Projects</p> <p>Mid-Chapter Test</p> <p>End of Chapter Test</p> <p>End of Unit Test</p> |
| October/No | Unit 2: The Number | Unit 2: How can | 6.NS.1: Interpret and compute quotients | 2a, 2b, 2c, 2d, 2e, | Exit Tickets |

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| <p>vember</p> | <p>System</p> <p>Ch. 3: Compute with multi-digit numbers</p> <p>Ch. 4: Multiply and Divide Fractions</p> <p>Ch. 5: Integers and the Coordinate Plane</p> | <p>mathematical ideas be represented?</p> <p>Ch. 3: How can estimating be helpful</p> <p>Ch. 4: What does it mean to multiply and divide fractions</p> <p>Ch. 5: How are integers and absolute value used in real-world situations?</p> | <p>of fractions, and solve word problems involving division of fractions by fractions,</p> <p>6.NS.2: Fluently divide multi-digit numbers</p> <p>6.NS.3: Fluently add, subtract, multiply and divide multi-digit decimals</p> <p>6.NS.5: Understand that positive and negative numbers are used together to describe quantities having opposite directions or values</p> <p>6.NS.6: Understand a rational number as a point on the number line.</p> <p>6.NS.6a: Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of a number is the number itself.</p> <p>6.NS.6b: Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the location of the points is related by reflections across one or both axes.</p> <p>6.NS.6c: Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on coordinate pairs</p> <p>6.NS.7: Understand the ordering and absolute value of rational numbers.</p> <p>6.NS.7a: Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.</p> <p>6.NS.7b: Write, interpret, and explain statements of order for rational numbers in real-world contexts.</p> <p>6.NS.7c: Understand the absolute value of a rational number as its distance from 0 on</p> | <p>2f</p> <p>3a, 3c, 3e, 3f</p> | <p>Inquiry Labs/ Unit Projects</p> <p>Unit Vocabulary</p> <p>Word Problems/Problem Solving</p> <p>Friday Math Stations</p> <p>Mid-Chapter Test</p> <p>End of Chapter Test</p> <p>End of Unit Test</p> |
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| | | | <p>the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.</p> <p>6.NS.7d: Distinguish comparisons of absolute value from statements about order.</p> <p>6.NS.8: Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane.</p> <p>6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems.</p> <p>6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.</p> | |
| <p>November/ December/ January</p> | <p>Unit 3: Expressions and Equations</p> <p>Ch. 6: Expressions</p> <p>Ch. 7: Equations</p> <p>Ch. 8: Functions and Inequalities</p> | <p>Unit: 3: How can you communicate mathematical ideas effectively?</p> <p>Ch. 6: How is it helpful to write numbers in a different way?</p> <p>Ch. 7: How do you determine if two numbers or expressions are equal?</p> <p>Ch. 8: How are the $<$, $>$, and $=$ symbols useful?</p> | <p>6.EE.1: Write and evaluate numerical expressions involving whole-number exponents.</p> <p>6.EE.2: Write, read, and evaluate expressions in which letters stand for numbers.</p> <p>6.EE.2a: Write expressions that record operations with numbers and with letters standing for numbers.</p> <p>6EE.2b: Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.</p> <p>6.EE.2c: Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations using order of operations</p> <p>6.EE.3: Apply the properties of operations to generate equivalent expressions.</p> <p>6.EE.4: Identify when two expressions are</p> | <p>Exit Tickets</p> <p>Unit Vocabulary</p> <p>Word Problems/Problem Solving</p> <p>Friday Math Stations</p> <p>Inquiry Labs/ Unit Projects</p> <p>Mid-Chapter Test</p> <p>End of Chapter Test</p> <p>End of Unit Test</p> |

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6.EE.5: Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any

6.EE.6: Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

6.EE.7: Solve real-world and mathematical problems by writing and solving equations of the form $x+p=q$ and $px=q$ for cases in which p , q , and x are all nonnegative rational numbers.

6.EE.8: Write an inequality of form $x>c$ or $x<c$ to represent a constraint or condition in a real-world or mathematical problem.

6.EE.9: Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as a dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between dependent and independent variables using graphs and tables, and relate these to the equation.

6.NS.3: Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

6.NS.4: 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. Use the distributive property to express a sum of two whole numbers 1-100 with a

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| | | | <p>common factor as a multiple of a sum of two whole numbers with no common factor.</p> <p>6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g. by reasoning about tables if equivalent ratios, tape diagrams, double number line diagrams, or equations.</p> | | |
| February/March/April | <p>Unit 4: Geometry</p> <p>Ch. 9: Area</p> <p>Ch. 10: Volume and Surface Area</p> | <p>Unit 4: How can you use different measurements to solve real-world problems?</p> <p>Ch. 9: How does measurement help you solve problems in everyday life?</p> <p>Ch. 10: How is shape important when measuring a figure? (“Dream Bedroom”)</p> | <p>6.G.1: Find the area of right triangles, other triangles, special quadrilaterals, and polygons</p> <p>6.G.2: Find the volume of a right rectangular prism with fractional edge lengths</p> <p>6.G.3: 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.</p> <p>6.G.4: Represent three-dimensional figures using nets made up of these figures.</p> <p>6.NS.8: Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane.</p> | <p>2a, 2b, 2c, 2d, 2e, 2f</p> <p>3a, 3c, 3e, 3f</p> | <p>Exit Tickets</p> <p>Unit Vocabulary</p> <p>Word Problems/Problem Solving</p> <p>Friday Math Stations</p> <p>Inquiry Labs/ Unit Projects/”Dream Bedroom to Scale”</p> <p>Mid-Chapter Test</p> <p>End of Chapter Test</p> <p>End of Unit Test</p> |
| April/May/June | <p>Unit 5: Statistics and Probability</p> <p>Ch. 11: Statistical Measures</p> <p>Ch. 12: Statistical Displays</p> | <p>Unit 5: Why is learning mathematics important?</p> <p>Ch. 11: How are the mean, median, and mode helpful in describing data?</p> <p>Ch. 12: Why is it important to carefully evaluate graphs?</p> | <p>6.SP.1: Recognize a statistical question.</p> <p>6.SP.3: Recognize that a measure of center for a numerical data set summarizes all of its values with a single number.</p> <p>6.SP.4: Display numerical data in plots on a number line.</p> <p>6.SP.5: Summarize numerical data sets in relation to their context, such as by:</p> <p>6.SP.5a: reporting the number of observations</p> <p>6.SP.5b: describe the nature of the attribute under investigation, including</p> | <p>2a, 2b, 2c, 2d, 2e, 2f</p> <p>3a, 3c, 3e, 3f</p> | <p>Exit Tickets</p> <p>Inquiry Labs/ Unit Projects</p> <p>Unit Vocabulary</p> <p>Word Problems/Problem Solving</p> <p>Friday Math Stations</p> <p>Mid-Chapter Test</p> <p>End of Chapter Test</p> |

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| | | | how it was measured and its units of measurement | | End of Unit Test |
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