

6th Grade Mathematics Curriculum Map 2023

Pacing Guide	Standard Code & Indicator	Sample Learning Activities	Sample Assessments	Additional Standards
August-October	<p>6.NS.2 Fluently divide multi-digit numbers using the standard algorithm.</p> <p>6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.</p> <p>6.NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values, use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</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>	<ul style="list-style-type: none"> -Divide whole numbers -Add, Subtract, Multiply and Divide Decimals -Define and identify Integers -Comparing and Ordering Integers -Adding, Subtracting, Multiplying and Dividing Integers -Understanding Exponents -Identify and apply the Order of Operations -Determine the GCF and LCM 	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Decimals Quiz Order of Operation Poster</p> <p>Summative Assessments: Chapter Test</p> <p>Benchmark Assessment: LinkIt BOY Benchmark BOY Benchmark</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard W 6.2D Using precise language, students will write vocabulary rich, read world math problems demonstrating understanding of decimals for their partner to solve.</p> <p>Technology Standard: 9.4.8.TL.6: Collaborate to develop work that provides perspectives on a real-world problem.</p>

	<p>6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.</p>	<p>-Apply Prime Factorization</p> <p>-Turning fractions to decimals</p> <p>Add, Subtract, Multiply and Divide Fractions</p> <p>- Interpret and compute quotients of fractions</p> <p>Instructional Resources: Big Ideas Math Program Teacher Created Resources</p> <p>Teacher Technology: Activ Panel Activ View Kahoot</p> <p>Student Technology: Google Classroom Chromebooks Study Island MathIXL</p>		
November-December	<p>6.SP.1 Recognize a statistical question as one that anticipates variability in the</p>	<p>-Define and recognize a statistical question</p>	<p>Formative Assessments:</p>	<p>Interdisciplinary Standard:</p>

	<p>data related to the question and accounts for it in the answers.</p> <p>6.SP.2 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.</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, while a measure of variation describes how its values vary with a single number.</p> <p>6.SP.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.</p> <p>6.SP.5 Summarize numerical data sets in relation to their context.</p> <p>6.SP.5.a Reporting the number of observations.</p> <p>6.SP.5.b Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</p>	<p>-Understand the importance of data Collection and learn to collect/display it in a variety of ways</p> <p>-Define and determine: Mean, Median, Mode, Outliers</p> <p>-Create line plots, scatter plots histograms and box and whisker plots</p> <p>-Understand and find the Mean Absolute Deviation</p> <p>Instructional Resources: Big Ideas Math Program Teacher Created Resources</p> <p>Teacher Technology: Activ Panel Activ View Kahoot</p> <p>Student Technology:</p>	<p>Quizzes Homework/Classwork Teacher Observation M/M/M/O Quiz</p> <p>Summative Assessments: Chapter Test</p> <p>Accommodations and Modifications</p>	<p>SL 6.2 Data Analysis Group Challenge</p> <p>Technology Standard: 9.4.8.TL.6: Collaborate to develop work that provides perspectives on a real-world problem.</p>
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	<p>6.SP.5.c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), 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.</p> <p>6.SP.5.d Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.</p>	<p>Google Classroom Chromebooks Study Island MathIXL</p>		
December-January	<p>6.NS.C.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.</p> <p>6.NS.C.6 a 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, e.g., $-(-3) = 3$, and that 0 is its own opposite.</p> <p>6.NS.C.6c Find and position integers and other rational numbers on a horizontal or vertical number line</p>	<p>-Plot Ordered Pairs</p> <p>-Understand and use a coordinate plane</p> <p>-Identify the X and Y axis</p> <p>-Understand and identify the different Quadrants</p> <p>-Determine the coordinate of a provided dot</p> <p>-Apply understanding of quadrants, axis and ordered pairs</p>	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Coordinate Graph Quiz</p> <p>Summative Assessments: Chapter Test Plot Chart Art Creation</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard PE 2.2.8.MSC.1: Students will write and dictate movement sequences for their partner in order to be “plotted” on the life-size quadrant.</p> <p>Technology Standard: 9.4.8.TL.6: Collaborate to develop work that provides perspectives on a real-world problem.</p>

	<p>diagram; find and position pairs of integers and other rational numbers on a coordinate plane.</p> <p>6.NS.C.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 locations of the points are related by reflections across one or both axes.</p> <p>6.NS.C.7 Understand ordering and absolute value of rational numbers.</p> <p>6.NS.C.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.</p> <hr/> <p>6.NS.C.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts.</p> <p>6.NS.C.7c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.</p>	<p>- Determine the Point of Origin</p> <p>-Understand the Absolute Value</p> <p>-Understand and identify reflections</p> <p>-Identify and define Rational Numbers</p> <p>-Use and create: Function Tables</p> <p>-Interpret statements of inequality</p> <p>Instructional Resources: Big Ideas Math Program Teacher Created Resources</p> <p>Teacher Technology: Activ Panel Activ View Kahoot</p> <p>Student Technology:</p>		
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	<p>6.NS.C.7d Distinguish comparisons of absolute value from statements about order.</p> <p>6.NS.C.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.</p> <p>6.G.A.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. Apply these techniques in the context of solving real-world and mathematical problems.</p> <p>6.EE.C.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 the dependent variable, in terms of the other quantity, thought of as the independent variable.</p>	<p>Google Classroom Chromebooks Study Island MathIXL</p>		
February-March		-Define, understand and solve problems with Ratios	Formative Assessments: Quizzes Homework/Classwork	Interdisciplinary Standard: Science MS-PS2-1 Applying unit rate problems to

	<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 relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.</p> <p>6.RP.3.b Solve unit rate problems including those involving unit pricing and constant speed.</p> <p>6.RP.3.c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.</p> <p>6.RP.3d Use ratio reasoning to convert measurement units; manipulate and</p>	<p>-Determine: Unit Rates</p> <p>-Understand and solve Equivalent Ratios</p> <p>-Define and apply understanding of: Proportions</p> <p>-Determine Rates with Measurement</p> <p>-Identify and apply understanding of percents</p> <p>-Convert percents, decimals and fractions</p> <p>Instructional Resources: Big Ideas Math Program Teacher Created Resources</p> <p>Teacher Technology: Activ Panel Activ View Kahoot</p> <p>Student Technology: Google Classroom</p>	<p>Teacher Observation Proportions Quiz</p> <p>Summative Assessments: Chapter Test</p> <p>Accommodations and Modifications</p>	<p>speed and motion of two objects, collecting data to put in table for further analysis.</p> <p>Technology Standard: 9.4.8.TL.6: Collaborate to develop work that provides perspectives on a real-world problem.</p>
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	transform units appropriately when multiplying or dividing quantities.	Chromebooks Study Island MathIXL		
March/April	<p>6.EE.A. 1 Write and evaluate numerical expressions involving whole-number exponents</p> <p>6.EE.A. 2 Write, read, and evaluate expressions in which letters stand for numbers.</p> <p>6.EE.A 2. a Write expressions that record operations with numbers and with letters standing for numbers.</p> <p>6.EE.A.2.b 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.A.2.c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order</p> <p>6.EE.A.3 Apply the properties of operations to generate equivalent expressions.</p>	<p>-Identify and understand variables and expressions</p> <p>-Read, write and evaluate equations</p> <p>-Use and solve equations</p> <p>-Define and apply understanding of the Distributive Property</p> <p>-Solve Inequalities</p> <p>-Evaluate expressions at specific values of their variables.</p> <p>-Create equivalent expressions</p> <p>Instructional Resources: Big Ideas Math Program Teacher Created Resources</p>	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Inequalities Check In</p> <p>Summative Assessments: Chapter Test</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard W 6.2 Write the steps, using academic vocabulary and appropriate transitions, to solving for a variable.</p> <p>Technology Standard: 9.4.8.TL.6: Collaborate to develop work that provides perspectives on a real-world problem.</p>

	<p>6.EE.A.4 Identify when two expressions are equivalent</p> <p>6.EE.B.5 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.</p> <p>6.EE.B.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.</p> <p>6.EE.B.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.</p> <p>6.EE.B.8 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; represent</p>	<p>Teacher Technology: Activ Panel Activ View Kahoot</p> <p>Student Technology: Google Classroom Chromebooks Study Island MathIXL</p>		
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	solutions of such inequalities on number line diagrams.			
April-June	<p>6.G.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.</p> <p>6.G.2 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 $V = lw h$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</p> <p>6.G.4 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.</p> <p>6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.</p>	<ul style="list-style-type: none"> -Define Area -Determine the area of various shapes -Define volume -Determine the volume of various shapes such as a right rectangular prism -Apply the formulas for determining area and volume -Understand and identify 3D figures and represent them using nets made up of rectangles and triangles -Understand and apply knowledge of: nets -Discuss and determine: Surface Area -Learn how to Balance a checkbook by 	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Area and Volume Quiz</p> <p>Summative Assessments: Chapter Test</p> <p>Benchmark Assessments: LinkIt EOY Benchmark EOY Benchmark</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard: SL 6.2 Shape (Area and volume) Group Escape Room</p> <p>Technology Standard: 9.4.8.TL.6: Collaborate to develop work that provides perspectives on a real-world problem.</p>

		<p>applying understanding of decimals</p> <p>-Real World Budgeting Activity</p> <p>Instructional Resources: Big Ideas Math Program Teacher Created Resources</p> <p>Teacher Technology: Activ Panel Activ View Kahoot</p> <p>Student Technology: Google Classroom Chromebooks Study Island MathIXL</p>		
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Alternate Assessments: Checkbook Analysis; Where in the World is our principal? (Coordinate Application)

21st Century Standards: 9.1.8.E.1 & 9.2.8.B.3

21st Century Skills: Critical Thinking, Collaboration & Productivity

Career Ready Practices: CRP 2, CRP 3 and CRP 8