Title: 6th Grade Math Curriculum Map

Unit:	**The Number System**
Big Ideas:	Apply and extend previous understandings of multiplication and division to include decimal numbers and fractions. Apply and extend previous understanding of numbers to the system of rational numbers.
Unit Essential Questions:	How can you extend the use of place value to decimal operations? How is working with decimals easier than working with fractions? What does it mean to have less than nothing? Why do we need numbers other than positive whole numbers? How do you know when to use positive numbers and when to use negative numbers? Why do we need positive and negative numbers? How do you know when to use positive numbers and when to use negative numbers?

Concept & Pacing	Pa Core Standard	Key Vocabulary	Essential Questions	Competencies (skills, knowledge, abilities)	Mini-Lessons/Activities	Instructional Materials	Assessments
Chapter 3 (11 days)	CC.2.1.6.E.2 Identify and choose appropriate processes to compute fluently with multi-digit numbers.	sum, difference, product, quotient, dividend, divisor, compatible numbers	How do you add, subtract, multiply and divide multi-digit numbers using the standard algorithms? For what operations are decimal points lined up in solving problems? How do you correctly place the decimal point when multiplying and dividing decimal numbers?	- add zeroes as place holders - regroup when necessary - correctly place decimal point in answers when multiplying and dividing decimals - line up decimal points when adding and subtracting - estimate to determine if answers are reasonable	- Dividing Decimals color by number - Operations with Decimals Escape Room - Canvas Lesson Reviews	Glencoe Math Course 1 Volume 1 textbook Chapter 3 - Lesson 1 - Lesson 3 - Lesson 4 - Lesson 5 - Lesson 7 - Lesson 8	- Chapter 3 Mid-Chapter Check - Chapter 3 Canvas Reviews - Chapter 3 Test
Chapter 4 (15 days)	CC.2.1.6.E.1 Apply and extend previous understandings of multiplication	commutative property, numerator, denominator, reciprocal, cross-canceling	How can cross canceling be used to make a problem easier to solve?	- convert whole numbers to fractions by placing them over a denominator of 1 - utilize cross canceling to simplify within a	-Improper Fractions and Mixed Number review worksheets with videos -Improper Fraction and Mixed Number Jeopardy -Canvas Reviews	Glencoe Math Course 1 Volume 1 textbook Chapter 4 - Lesson 2 - Lesson 3 - Lesson 4	-Chapter 4 Canvas Reviews -Chapter 4 Test

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	and division to divide fractions by fractions.	, improper fraction, simplest form	How do we convert mixed numbers to improper fractions when multiplying and dividing? How do we express our final answers in simplest form?	problem, making it easier to solve - convert mixed numbers to improper fractions when multiplying and dividing - use the reciprocal when dividing fractions and mixed numbers - simplify all final answers	-Multiply Fractions, Whole, and Mixed Numbers Escape Room -Dividing Fractions Color by Number	- Lesson 6 - Lesson 7 - Lesson 8	
Chapter 5 (15 days)	CC.2.1.6.E.4 Apply and extend previous understandings of numbers to the system of rational numbers.	integer, negative integer, positive integer, credit, debit, deposit, withdraw, opposites, absolute value, coordinate plane, quadrants, rational numbers, repeating decimal, terminating decimal	How do you place integers on a number line when considering the value of them compared to zero? How do you plot ordered pairs on a number line using knowledge of positive and negative integers? How can you easily compare and order rational numbers?	- find integers on a number line - understand the value of zero - understand that absolute value is the distance a number is from zero and therefore is always positive - recognize symbols for absolute value - plot coordinates in all four quadrants of a coordinate plane - identify the four quadrants of a coordinate plane - compare and order integers - distinguish between terminating and repeating decimals - compare and order rational numbers by making sure decimals contain the same place value prior to comparing	- Plotting coordinates in 4 quadrants mystery picture pages - Quizziz activities for each lesson - Integers Escape Room	Glencoe Math Course 1 Volume textbook Chapter 5 - Lesson 1 - Lesson 2 - Lesson 6 - Lesson 3 - Lesson 4 - Lesson 5	- Chapter 5 Canvas Reviews - Chapter 5 Test

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Chapter 2 (15 days)	CC.2.1.6.D.1 Understand ratio concepts and use ratio reasoning to solve problems.	least common denominator, percent, percent proportion, proportion, rational number,	How do we convert among fractions, decimals and percents? Why is it important to have all numbers in the same form prior to comparing? Where do we find percents in the real world, and how do we solve problems involving percents?	- convert among decimals, fractions and percents with and without a calculator - compare and order fractions, decimals and percents by converting all numbers to the same form prior to comparing - recognize that "of" indicates multiplication and "is" indicates where to place the equal sign in a math problem - determine the percent of a number - find a missing number in percent problems	-Compare and order decimals worksheets with videos -Compare and order decimals Jeopardy - Extra practice worksheets lessons 1-3 on decimals and fractions, percents and fractions, and percents and decimals -Canvas Reviews -Fraction, Decimal, Percent Color by Number Worksheet -Percent of a Number Pairs Check Worksheet -Percent of a Number Maze, Scavenger Hunt, and Matching worksheets/activities -Decimals, fractions, percents, and models sort	Glencoe Math Course 1 Volume 1 textbook Chapter 2 - Lesson 1 - Lesson 2 - Lesson 3 - Lesson 5 - Lesson 7 - Lesson 8	-Canvas Reviews -Chapter 2 Quiz on lessons 1, 2, and 3 -Chapter 2 Test on all lessons
Chapter 1 (16 days)	CC.2.1.6.D.1 Understand ratio concepts and use ratio reasoning to solve problems. CC.2.1.6.E.3 Develop and/or apply number theory concepts to find common factors and multiples.	coordinate plane, equivalent ratios, graph, greatest common factor, least common multiple, ordered pair, origin, x-axis, y-axis, x-coordinate, y-coordinate, rate, ratio, ratio table, unit price,unit rate	How can we use the Ladder Method to calculate the GCF and LCM of numbers? How can calculating the unit rate help us to solve problems? How can scaling be used to solve problems related to ratios?	- calculate the GCF and LCM using the ladder method - express ratios in 3 different forms - determine the unit rate - use equivalent ratios to solve problems, remembering to label the individual parts - use the unit rate to solve real world ratio problems - scale forward and backward to solve ratio problems - complete ratio tables and display data on graphs	-Presents and Tree ratio worksheet -Review of Chapter 1 lessons 1, 2, and 3 worksheet -Canvas Reviews -Review of Chapter 1 lessons 4, 5, and 6 worksheet -Chapter 1 Test Review	Glencoe Math Course 1 Volume 1 textbook Chapter 1 - Lesson 1 - Lesson 2 - Lesson 3 - Lesson 4 - Lesson 5 - Lesson 6 - Lesson 7	Canvas Reviews Chapter 1 Test

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Unit:	Algebraic Concepts
Big Ideas:	Apply and extend previous understandings of arithmetic to algebraic expressions. Reason about and solve one-variable equations and inequalities. Represent and analyze quantitative relationships between dependent and independent variables.

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Unit Essential Questions:	What is the power of mathematical expressions? What is a property? Why are properties useful? How can you represent equal and unequal relationships? How are two-variable relationships different from one-variable relationships? When do you need two variables?

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Chapter 6 (14 days)	CC.2.2.6.B.1 Apply and extend previous understandings of arithmetic to algebraic expressions.	powers, exponent, squared, cubed, numerical expression, algebraic expression, order of operations, variable, evaluate, algebra, commutative property, associative property, distributive property, term, coefficient, constant, like terms	How do we use order of operations to solve numerical and algebraic expressions? How can the distributive property be used to produce equivalent expressions (remembering to multiply both BOTH numbers inside the parentheses) How do we simplify expressions by combining like terms?	- write and evaluate numerical expressions involving exponents - write and evaluate algebraic expressions involving exponents - apply the properties of addition and multiplication - apply order of operations in solving numerical and algebraic expressions - apply the distributive property to produce equivalent expressions and also to factor expressions - identify the parts of an expression using mathematical terms (term, constant, coefficient, product, factor) - combine like terms	-Chapter 6 Lessons 1 and 2 worksheet -Order of Operations Color by Number -Canvas Reviews -Chapter 6 Lessons 6 and 7 Review worksheet	Glencoe Math Course 1 Volume 2 textbook Chapter 6 - Lesson 1 - Lesson 2 - Lesson 3 - Lesson 4 - Lesson 5 - Lesson 6 - Lesson 7	-Canvas Reviews -Chapter 6 Lessons 1 and 2 Quiz -Chapter 6 Test
Chapter 7 (7 days)	CC.2.2.6.B.2 Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.	inverse operations, coefficient, variable, equation, expression	How do we use inverse operations to solve one-step equations?	- use inverse operations to solve one-step equations involving whole numbers, decimals and fractions	-Equations Color by Number -Equation Maze -Canvas Review	Glencoe Math Course 1 Volume 2 Chapter 7 - Lesson 2 - Lesson 3 - Lesson 4 - Lesson 5	-Canvas Reviews -Chapter 7 Test

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Chapter 8 (days)	CC.2.2.6.B.2 Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.	inequality, inverse operations, equation, expression	What is the difference between an equation and an inequality? How can we write inequalities for real life situations? How do we use inverse operations to solve inequalities? How do we graph inequalities on a number line?	- determine the difference between an equation and an inequality - use substitution to decide if a given number makes an inequality true - write inequalities for real world situations - solve inequalities - graph inequalities on a number line	-Equations and Inequalities Google Form assignment -Quizziz Activities -Canvas Reviews	Glencoe Math Course 1 Volume 2 textbook Chapter 8 - Lesson 5 - Lesson 6 - Lesson 7	-Canvas Reviews -Chapter 8 Test

Unit:	**Geometry**
Big Ideas:	Solve real-world and mathematical problems involving area, surface area, and volume.
Unit Essential Questions:	How can we decompose shapes to find the area of complex shapes? How do we determine the surface area of 3 dimensional shapes?

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Chapter 9 (9 days)	C.C.2.3.6.A.1 Apply appropriate tools to solve real-world and mathematical problems involving area, surface area and volume.	polygon parallelogram rhombus trapezoid base height formula congruent area perimeter composite figure	How do we use formulas to calculate the area of polygons? How do we correctly identify the base and height of polygons? How can we decompose complex shapes to find the total area? How do we calculate the area of shapes drawn on a coordinate plane?	-identify bases and heights -accurately use formulas -label the area using the correct units of measure -break shapes apart and determine missing dimensions -solve for missing dimensions given the total area of the polygon	-Canvas reviews -Area google slides -Area escape room -Polygons on the coordinate plane activity	Glencoe Math Course 1 Volume 2 textbook Chapter 9 -Lesson 1 -Lesson 2 -Lesson 3 -Lesson 5 -Lesson 6	-Canvas Reviews -Chapter 9 test
Chapter 10 (7 days)	CC.2.3.6.A.1 Apply appropriate tools to solve real-world and mathematical problems involving area, surface area and volume.	prism pyramid surface area net volume rectangular prism triangular prism	How do we calculate the volume of rectangular prisms? How do we calculate the surface area of rectangular and triangular prisms?	-accurately use formulas -label volume and surface area using the correct units of measure	-Canvas Reviews -Surface area of triangular prisms maze	Glencoe Math Course 1 Volume 2 textbook Chapter 10 -Lesson 1 -Lesson 3 -Lesson 4	-Canvas Reviews -Chapter 10 test

Unit:	**Measurement, Data and Probability**
Big Ideas:	Calculate measures of center (median, mean, mode) and variability (range, IQR, and MAD.) Display numerical data in various forms(number line, line plot, histogram, box and whisker plot.)
Unit Essential Questions:	How do we display, analyze, and interpret data in various forms?

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Chapter 11 (11 days)	CC.2.3.6.B.1 Demonstrate an understanding of statistical variability by displaying, analyzing and summarizing distributions.	mean average measures of center median mode measures of variance quartiles first quartile third quartile interquartile range range outliers mean absolute deviation	How do we calculate the mean and median of a set of data? How do we calculate the interquartile range of a set of data? How do calculate the mean absolute deviation of a set of data?	-calculate the mean and median from a set of data -calculate the range and interquartile range -calculate the mean absolute deviation	-"MAD" math lib -Measures of variation google slide -MAD maze -Canvas Reviews -Mean, median, mode, range escape room -Mean, median, mode, range color by number	Glencoe Math Course 1 Volume 2 textbook -Lesson 1 -Lesson 2 -Lesson 3 -Lesson 4	-Canvas reviews -Chapter 11 test
Chapter 12 (5 days)	CC.2.3.6.B.1 Demonstrate an understanding of statistical variability by displaying, analyzing and summarizing distributions.	line plot box plot histogram	How do we organize, display, and analyze data as line plots, histograms, and box plots? How do you determine which graph is best for the type of data given?	-read and analyze data from different types of graphs -organize data to create line plots, histograms, and box plots	-Box and whisker color by number -Canvas Reviews	Glencoe Math Course 1 Volume 2 textbook -Lesson 2 -Lesson 3	-Canvas Reviews -Chapter 12 test