**Course: 6th Grade Math** 

**Grade Level: 6** 

**Unit: Geometry (6.G)** 

## **Essential** Questions

- How can you use different measurements to solve real-life problems?
  - How does measurement help you solve problems in everyday life?
  - How is shape important when measuring a figure?

Standard	Learning Targets		Common	Common Resources
	Concept / Content	Skills	Assessments	& Activities
M.6.G.A.2 M.6.G.A.3 M.6.G.A.4	Polygon Parallelogram Rhombus Base Height Perpendicular Right angle Formula Congruent Composite figure Volume Vertex Three-dimensional figure Net Cubic units Lateral face Prism Pyramid Rectangular prism Slant height Surface area Triangular prism	<ul> <li>Find the area of a parallelogram</li> <li>Find the area and missing dimensions of triangles</li> <li>Find the area of a trapezoid</li> <li>Determine how changes in dimensions affect perimeter and area</li> <li>Draw polygons on the coordinate plane and use coordinates to find the length</li> <li>Find the areas of composite figures</li> <li>Use models to find the volume of rectangular prisms</li> <li>Calculate the volume of rectangular prisms</li> <li>Find the volume of triangular prisms</li> <li>Find the surface area of rectangular and triangular prisms using nets and formulas</li> <li>Solve real-world and mathematical problems involving the application of geometric concepts and skills</li> </ul>	Glencoe Math–Chapter 9 Test  Glencoe Math–Chapter 9 Vocabulary Quiz  Glencoe Math–Chapter 10 Test  Glencoe Math–Chapter 10 Vocabulary Quiz	Glencoe Math Course 1, Chapters 9 & 10

Course: 6th Grade Math Grade Level: 6

**Unit: Ratios and Proportional Relationships (6.RP)** 

# Essential Question(s)

- How can you use mathematics to describe change and model real-world situations?
  - How do you use equivalent rates in the real world?
  - ❖ When is it better to use a fraction, a decimal, or a percent?

Standard	Learning Targets		Common	Common Resources
	Concept / Content	Skills	Assessments	& Activities
M.6.RP.A.1 M.6.RP.A.3a M.6.RP.A.3b M.6.RP.A.3c M.6.RP.A.3d	Ratios Unit rates Ratio table Dimensional analysis Percent GCF LCM Rate Unit rate Graph Ordered pair Origin Scaling Unit price X-axis Y-axis X-coordinate Y-coordinate Equivalent fractions Rational number Percent Least common denominator Proportion Percent proportion	<ul> <li>Find GCF and LCM</li> <li>Use ratios to compare quantities</li> <li>Write rates as unit rates</li> <li>Use tables to solve problems involving ratios and rates</li> <li>Use graphs to represent problems involving ratios and rates</li> <li>Find equivalent ratios and rates by using unit rates and equivalent fractions</li> <li>Solve problems involving ratios and rates</li> <li>Write decimals as fractions or mixed numbers and vice versa</li> <li>Write percents as fractions and vice versa</li> <li>Write equivalent forms of fractions, decimals, and percents that are greater than 100% and less than 1%</li> <li>Compare and order fractions, decimals, and percents</li> <li>Estimate the percent of a number</li> <li>Find the percent problems to find the whole</li> </ul>	Glencoe Math–Chapter 1 Test  Glencoe Math–Chapter 1 Vocabulary Quiz  Glencoe Math–Chapter 2 Test  Glencoe Math–Chapter 2 Vocab	Glencoe Math Course 1, Chapters 1 and 2

Course: 6th Grade Math

**Grade Level: 6** 

**Unit: Statistics & Probability (6.SP)** 

# **Essential** Questions

- Why is learning mathematics important?
  - How are the mean, median and mode helpful in describing data?
  - Why is it important to carefully evaluate graphs?

Standard	Learning Targets		Common	Common Resources
	Concept / Content	Skills	Assessments	& Activities
M.6.SP.A.1 M.6.SP.A.3 M.6.SP.A.5 M.6.SP.A.5a M.6.SP.A.5b M.6.SP.A.5c M.6.SP.A.5c	Average First quartile Interquartile range Mean Mean absolute deviation Measure of center Measures of variation Median Mode Outliers Quartiles Range Statistical questions Third quartile Box plot Cluster Distribution Dot plot Frequency distribution Gap Histogram Line graph Line plot Peak	<ul> <li>Summarize numerical data using the mean</li> <li>Find and interpret the mean, median, and mode of a set of data</li> <li>Find the measures of variation</li> <li>Find and interpret the mean absolute deviation for a data set</li> <li>Choose an appropriate measure of central tendency</li> <li>Construct and analyze line plots</li> <li>Construct and analyze histograms</li> <li>Display and interpret data in box plots</li> <li>Describe a data distribution by its center, spread, and overall shape</li> <li>Draw and interpret line graphs</li> <li>Select an appropriate display for a set of data</li> <li>Recognize that a statistical question anticipates variability in the answers</li> </ul>	Glencoe Math–Chapter 11 Test  Glencoe Math–Chapter 11 Vocabulary Quiz  Glencoe Math–Chapter 12 Test  Glencoe Math–Chapter 12 Vocabulary Quiz	Glencoe Math Course 1, Chapters 11 & 12

Course: 6th Grade Math Grade Level: 6

**Unit: Expressions and Equations (6.EE)** 

# Essential Question(s)

- How can you communicate mathematical ideas effectively?
  - How is it helpful to write numbers in different ways?
  - How do you determine if two numbers or expressions are equal?
  - ❖ How are symbols, such as <, >, and = useful?

Standard	Learning Targets		Common	Common Resources
	Concept / Content	Skills	Assessments	& Activities
M.6.EE.A.1 M.6.EE.A.2a M.6.EE.A.2b M.6.EE.A.2c M.6.EE.A.3 M.6.EE.B.5 M.6.EE.B.6 M.6.EE.B.7 M.6.EE.B.8 M.6.EE.B.9	Powers Base Exponent Perfect squares Numeral expression Order of operations Algebra Variable Algebraic expression Evaluate Defining the variable Property Associative property Identity property Equivalent expressions Distributive property Factor the expression Term coefficient Constant Like terms Equation Equals sign Solution Solve Inverse operations Subtraction property of	<ul> <li>Represent numbers using exponents</li> <li>Find the value of expressions using order of operations</li> <li>Evaluate algebraic expressions</li> <li>Write verbal phrases as simple algebraic expressions</li> <li>Use properties to simplify expressions</li> <li>Use the Distributive Property to compute multiplication problems mentally and to rewrite algebraic expressions</li> <li>Solve equations using mental math and the guess, check, and revise strategy</li> <li>Write and solve addition equations</li> <li>Write and solve multiplication equations</li> <li>Write and solve division equations</li> <li>Complete function tables for given function rules</li> <li>Extend and describe sequences using algebraic expressions</li> <li>Construct and analyze different verbal, tabular, graphical, and algebraic representations of functions</li> <li>Solve one-step inequalities</li> </ul>	Glencoe Math–Chapter 6 Test  Glencoe Math–Chapter 6 Vocabulary Quiz  Glencoe Math–Chapter 7 Test  Glencoe Math–Chapter 7 Vocabulary Quiz  Glencoe Math–Chapter 8 Test  Glencoe Math–Chapter 8 Vocabulary Quiz	Glencoe Math Course 1, Chapters 6, 7, & 8

equality Addition property of equality Division property of equality Multiplication property of equality Function Function rule Function table Independent variable Dependent variable Sequence Term Geometric sequence Arithmetic sequence Linear function Inequality	Write and graph inequalities     Solve real-world and mathematical problems involving the application of concepts and skills in Expressions and Equations		
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Course: 6th Grade Math Grade Level: 6

**Unit: The Number System (6.NS)** 

#### **Essential Question(s)**

- How can mathematical ideas be represented?
  - How can estimating be helpful?
  - What does it mean to multiply and divide fractions?
  - ❖ How are integers and absolute value used in real-world situations?

Standard	Learning Targets		Common	Common Resources
	Concept / Content	Skills	Assessments	& Activities
M.6.NS.B.2 M.6.NS.B.3 M.6.NS.B.4 M.6.NS.C.5 M.6.NS.C.6 M.6.NS.C.7 M.6.NS.C.8	Product Annex Dividend Divisor Quotient Compatible numbers Fraction Numerator Denominator Commutative property Simplest form Mixed number Improper fraction Unit ratio Dimensional analysis Reciprocals Integers Negative integers Positive integers Absolute value Opposites Rational number Terminating decimal Repeating decimal Bar notation Quadrants	<ul> <li>Add and subtract decimals</li> <li>Estimate the products of decimals and judge the reasonableness of the results</li> <li>Find products of decimals and whole numbers</li> <li>Multiply decimals by decimals</li> <li>Find quotients of problems involving multi-digit numbers</li> <li>Estimate the quotients of decimals and judge the reasonableness of the results</li> <li>Divide decimals by whole numbers</li> <li>Divide decimals by decimals</li> <li>Estimate products with fractions</li> <li>Multiply fractions and whole numbers</li> <li>Multiply mixed numbers</li> <li>Use the greatest common factor and the least common multiple to perform operations with fractions</li> <li>Change units of measure in the customary system</li> <li>Divide whole numbers by fractions</li> <li>Divide fractions</li> <li>Divide mixed numbers</li> <li>Use integers to represent real-world situations</li> <li>Find the absolute value of an integer</li> </ul>	Glencoe Math–Chapter 3 Test  Glencoe Math–Chapter 3 Vocabulary Quiz  Glencoe Math–Chapter 4 Test  Glencoe Math–Chapter 4 Vocabulary Quiz  Glencoe Math–Chapter 5 Test  Glencoe Math–Chapter 5 Vocabulary Quiz	Glencoe Math Course 1, Chapters 3, 4, and 5

	<ul> <li>Use number lines to compare and order integers</li> <li>Write positive and negative fractions as decimals</li> <li>Compare and order rational numbers</li> <li>Graph ordered pairs on the coordinate plane</li> <li>Solve real-world and mathematical problems involving the application of concepts and</li> </ul>	
	skills in The Number System	