	G	rade 6 Trim	nester 1 * Highlights refer to verbiage change in NYS Next Generation Sto	<mark>andards</mark>
Unit	Modules	Lessons	Standards	Comments
				Links to Khan Academy in <mark>Blue</mark>
1 Numbers	1 Integers	1.1 - 1.3	NY-6.NS.4 Find the greatest common factor of two whole numbers less than or equal to 100. Use the distributive property to express a sum of two whole numbers with no common factor other than 1. Find the least common multiple of two whole numbers less than or equal to 12. e.g., Express 36 + 8 as 4 (9 + 2). NY-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. e.g., temperature above/below zero, elevation above/below sea level, debits/credits, positive/negative electric charge. NY-6.NS.6 Understand a rational number as a point on the number line. Use number lines and coordinate axes to represent points on a number line and in the coordinate plane with negative number coordinates. This topic is	Negative Numbers Complete Are You Ready? page 28 and Reading Start-Up on page 29 before you begin the module. GCF LCM Complete Are You Ready? page 44 and Reading Start-Up on page 45 before you begin the
	2 Factors & Multiples	2.1 -2.2		
	3 Rational Numbers	3.1 - 3.3		

			NY-6.NS.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts. e.g., Write –3°C > –7°C to express the fact that –3°C is warmer than – 7°C. NY-6.NS.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. e.g., For an account balance of –30 dollars, write –30 = 30 to describe the size of the debt in dollars. NY-6.NS.7d Distinguish comparisons of absolute value from statements about order. e.g., Someone with a balance of \$100 in their bank account has more money than someone with a balance of –\$1000, because 100 > –1000. But, the second person's debt balance is much greater than the first person's credit balance because –1000 >	
2 Number Operations	4 Operations with Fractions	4.1 - 4.4	NY-6.NS.1 Interpret and compute quotients of fractions and solve word problems involving division of fractions by Fractions. Note: Strategies may include but are not limited to the following: using visual fraction models, a standard algorithm, and equations to represent the problem.	Complete <i>Are You Ready?</i> page 76 and <i>Reading Start-Up</i> on page 77 before you begin the module. Operations with Fractions and
	5 Decimal Operations	5.1 - 5.5	 e.g., Create a story context for (²/₃) ÷ (³/₄) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (²/₃) ÷ (³/₄) = ⁸/₉ because ³/₄ of ⁸/₉ is ²/₃. In general, (^a/_b) ÷ (^c/_d) = ^{ad}/_{bc}. e.g., How much chocolate will each person get if 3 people share ¹/₂ lb of chocolate equally? How many ³/₄ cup servings are in ²/₃ of a cup of yogurt? How wide is a rectangular strip of land with length ³/₄ mi and area ¹/₂ square mi? 	Decimals Complete Are You Ready? page 104 and Reading Start-Up page 105 before you begin the module. This topic is included in link in Module 4.
			NY-6.NS.2 Fluently divide multi-digit numbers using a standard algorithm.	

NY-6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation.	
1 100 Llea tha diatributiva manantu ta avenana a suna af tuua ulaala munahana 1 100 uith a	Begin Module 6 See Trimester 2 Overview
e.g., Express 36 + 8 as 4 (9 + 2).	

	Grade 6 Trimester 2					
Unit	Modules	Lessons	Standards	Comments		
3 Ratios & Rates	6 Representing Ratios & Rates	6.1 - 6.3	NY-6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities., e.g., "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received three votes."	Complete Are You Ready? page 146 and Reading Start-Up page147 before you begin the module. Ratios Rates and Percentages		
	7 Applying Ratios & Rates	7.1 - 7.4	NY-6.RP.2 Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0 (b not equal to zero) and use rate language in the context of a ratio relationship. e.g., "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there are ¾ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."	Complete Are You Ready? page 170 and Reading Start-Up page171 before you begin the module. This topic is covered in links for Module 6.		
	8 Percent	8.1 - 8.3	NY-6.RP.3 Use ratio and rate reasoning to solve real-world and mathematical problems. Note: Strategies may include but are not limited to the following: tables of equivalent ratios, tape diagrams, double number lines, and equations. Note: Strategies may include but are not limited to the following: tables of equivalent ratios, tape diagrams, double number lines, and equations. NY-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. NY-6.RP.3b Solve unit rate problems. e.g., If it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed? What is the unit rate? Note: Problems may include unit pricing and constant speed. NY-6.RP.3c Find a percent of a quantity as a rate per 100. Solve problems that involve finding the whole given a part and the percent, and finding a part of a whole given the percent.	Complete Are You Ready? page 200 and Reading Start-Up page 201 before you begin the module. This topic is covered in links for Module 6.		
			e.g., 30% of a quantity means 30100 times the quantity. NY-6.RP.3d Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.			

			Note: Conversion of units occur within a given measurement system, not across different measurement systems beginning with 2023 NYS Assessment	
4 Equivalent Expressions	9 Generating Equivalent Numerical Expressions	9.1 - 9.3	NY-6.EE.1 Write and evaluate numerical expressions involving whole-number exponents. NY-6.EE.2 Write, read, and evaluate expressions in which letters stand for numbers. NY-6.EE.2a Write expressions that record operations with numbers and with letters	Complete Are You Ready? page 234 and Reading Start-Up page 235 before you begin the module. Exponents and Order of Operatons
	10 Generating Equivalent Algebraic Expressions	10.1 - 10.3	standing for numbers. e.g., Express the calculation "Subtract y from 5" as 5 – y. NY-6.EE.2b Identify parts of an expression using mathematical terms (term, coefficient, sum, difference, product, factor, and quotient); view one or more parts of an expression as a single entity. e.g., Describe the expression 2(8 + 7) as a product of two factors: view (8 + 7) as both a single entity and a sum of two terms. NY-6.EE.2c Evaluate expressions given specific values for their variables. Include expressions that arise from formulas in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order (Order of Operations). e.g., Use the formulas V = s³ and SA = 6s² to find the volume and surface area of a cube with sides of lengths = ½. Note: Expressions may or may not include parentheses. Nested grouping symbols are not included.	Complete Are You Ready? page 258 and Reading Start-Up page 259 before you begin the module. Equations and Inequalities Variables and Expressions
			NY-6.EE.3 Apply the properties of operations to generate equivalent expressions. e.g., Apply the distributive property to the expression 3(2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y. NY-6.EE.4 Identify when two expressions are equivalent. e.g., The expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y represents. NY-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.	Begin Unit 5 See Trimester 3 Overview

			Grade 6 Trimester 3	
Unit	Modules	Lessons	Standards	Comments
5 Equations & Inequalities	11 Equations & Relationships	11.1 – 11.4	NY-6.EE.2a Write expressions that record operations with numbers and with letters standing for numbers. e.g., Express the calculation "Subtract y from 5" as 5 – y. NY-6.EE.2b Identify parts of an expression using mathematical terms (term, coefficient, sum, difference, product, factor, and quotient); view one or more parts of an expression as a single entity.	Complete Are You Ready? page 294 and Reading Start-Up page 295 before you begin the module. This topic is covered in links for Module 10.
	12	12.1 – 12.4	e.g., Describe the expression 2(8 + 7) as a product of two factors: view (8 + 7) as both a single entity and a sum of two terms.	Complete Are You Ready? page 328 and Reading Start-Up
	Relationships In Two Variables	In Two In Two a question: which values from a specified set, if any, make the equation or inequality	page 329 before you begin the module. This topic is covered in links for Module 10.	
			NY-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.	
			NY-6.NS.6 Understand a rational number as a point on the number line. Use number lines and coordinate axes to represent points on a number line and in the coordinate plane with negative number coordinates.	
			NY-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 locations of the points are related by reflections across one or both axes.	
			NY-6.NS.6c Find and position integers and other rational numbers on a horizontal or vertical number line. Find and position pairs of integers and other rational numbers on a coordinate plane.	
			NY-6.NS.8 Solve real-world and mathematical problems by graphing points on a coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	

			NY-6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form x + p = q; x - p = q; px = q; and x/p = q for cases in which p, q and x are all nonnegative rational. Note: For the x/p = q case, p ≠ 0. NY-6.EE.8 Write an inequality of the form x > c, x ≥ c, x ≤ c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of these forms have infinitely many solutions; represent solutions of such inequalities on a number line. NY-6.EE.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another. Given a verbal context and an equation, identify the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables and relate these to the equation. e.g., In a problem involving motion at constant speed, list and graph ordered pairs of distances and times. e.g., Given the equation d = 65t to represent the relationship between distance and time, identify t as the independent variable and d as the dependent variable.	
6 Relationships in Geometry	13 Area & Polygons	13.1-13.4	NY-6.G.1 Find area of triangles, trapezoids, & other polygons by composing into rectangles or decomposing into triangles and quadrilaterals. Apply these techniques in the context of solving real world & mathematical problems. Note: The inclusive definition of a trapezoid will be utilized, which defines a trapezoid as "A quadrilateral with at least one pair of parallel sides." (This definition includes parallelograms.	Complete <i>Are You Ready?</i> page 368 and <i>Reading Start-Up</i> page 369 before you begin the module. <u>Area</u>
	14 Distance & Area in the Coordinate Plane 15 Surface Area & Volume	14.1-14.2 15.1-15.3	NY-6.G.2 Find volumes of right rectangular prisms with fractional edge lengths in the context of solving real world and mathematical problems. NY-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. Apply these techniques in the context of solving real-world and mathematical problems. NY-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. Note: Three-dimensional figures include only right rectangular prisms, right rectangular pyramids, and right triangular prisms. When finding surface areas, all necessary measurements will be given.	Complete Are You Ready? Page 398 and Reading Start-Up page 399 before you begin the module. Coordinate Plane Complete Are You Ready? page 416 and Reading Start-Up page 417 before you begin the module. Surface Area and Volume

	Data		 NY-6. SP.1b Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Note: Students need to understand that data are generated with respect to particular contexts or situations and can be used to answer questions about those contexts or situations. NY-6. SP.1c Understand that the method and sample size used to collect data for a particular question is intended to reduce the difference between a population and a 	* Standards in red denote new NYS Next Gen Standards that are not covered in our Gr. 6 Go Math! Resource. Refer to projects in our Team.
7 Measurement and Data	16 Displaying, Analyzing, And Summarizing	16.1, 16.4, 16.5	NY-6. SP.1a Recognize that a statistical question is one that anticipates variability in the data related to the question and accounts for it in the answers. • e.g., "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.	Complete <i>Are You Ready?</i> page 446 and <i>Reading Start-Up</i> page 447 before you begin the module.
			NY-6.G.5 Use area and volume models to explain perfect squares and perfect cubes. NY-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 locations of the points are related by reflections across one or both axes. NY-6.NS.8 Solve real-world & mathematical problems by graphing points on a coordinate plane. Include use of coordinates & absolute value to find distances between points with the same first coordinate or the same second coordinate. NY-6.EE.2c Evaluate expressions given specific values for their variables. Include expressions that arise from formulas in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order (Order of Operations). e.g., Use the formulas V = s³ and SA = 6s² to find the volume and surface area of a cube with sides of length s = ½. Note: Expressions may or may not include parentheses. Nested grouping symbols are not included. NY-6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form x + p = q; x − p = q; px = q; and x/p = q for cases in which p, q and x are all nonnegative rational. Note: For the x/p = q case, p ≠ 0.	

sample taken from the population so valid inferences can be drawn about the population. Generate multiple samples (or simulated samples) of the same size to recognize the variation in estimates or predictions. Note: Examples of acceptable methods to obtain a representative sample from a population include, but are not limited to, a simple random sample for a given population or a systematic random sample for an unknown population. Examples of unacceptable methods of sampling include, but are not limited to, online polls and convenience sampling because they introduce bias and are not representative of the population.	Online access to Grade 7 Go Math! resources will be provided Stats & Probability standards will be assessed on the Gr. 7 2023 NYS Assessment Data and Statistics
NY-6. SP.2 Understand that a set of quantitative data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. Notes: Students need to determine and justify the most appropriate graph to display a	All activities except IQR, Box Plots, and MAD
given set of data (histogram, dot plot). • Students extend their knowledge of symmetric shapes, to describe data displayed in dot plots and histograms in terms of symmetry. They identify clusters, peaks and gaps, recognizing common shapes and patterns in these displays of data distributions, and ask why a distribution takes on a particular shape for the context of the variable being considered.	
NY-6. SP.3 Recognize that a measure of center for a quantitative 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. Note: Measures of center are mean, median, and mode. The measure of variation is the range.	
NY-6. SP.4 Display quantitative data in plots on a number line, including dot plots and histograms.	
NY-6. SP.5 Summarize quantitative data sets in relation to their context. NY-6. SP.5a Report the number of observations.	New Next Gen Probability
NY-6. SP.5b Describe the nature of the attribute under investigation, including how it was measured and its units of measurement.	Standards will be addressed through project-based learning.
NY-6. SP.5c Calculate range and measures of center, as well as describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	

Grade 7 Unit 6 Probability	12	12.1, 12.2, 12.4	Note: Measures of center are mean, median, and mode. The measure of variation is the range. Role of outliers should be discussed, but no formula required. NY-6. SP.5d Relate the range and the choice of measures of center to the shape of the data distribution and the context in which the data were gathered. Note: Measures of center are mean, median, and mode. The measure of variation is the range NY-6. SP.6 Understand that the probability of a chance event is a number between 0 and 1 inclusive, that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event NY-6. SP.7 Approximate the probability of a simple event by collecting data on the chance process that produces it and observing its long-run relative frequency and predict the approximate relative frequency given the probability. e.g., When rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times. Note: Compound events are introduced in grade 7.	Statistics and Probability
	13	13.1 and 13.3	 NY-6. SP.8 Develop a probability model and use it to find probabilities of simple events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. NY-6. SP.8a Develop a uniform probability model by assigning equal probability to all outcomes and use the model to determine probabilities of simple events. e.g., The probability of rolling a six-sided fair number cube and landing on a 2 is 1/6. The probability of landing on an even number is 3/6. NY-6. SP.8b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. e.g., Find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies? 	