Ganado Unified School District

Math/6 Grade

PACING Guide SY 2016-2017

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
QUARTER ONE				
Q1 - Week 1	6.RP.A.1			•
• ConnectED • enVision • 12-1 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "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 nearly three votes."*	Bloom: Application & Comprehension Hess: DOK Level 2 EQ: • What are ratios and rates and how are they used in solving problems? •	I will be able to: • understand the concept of a ratio • use ratio language to describe a ratio relationship between two quantities •	• ratio • terms •
	6.RP.A.2			•

• ConnectED
• enVision
  • 12-3
  • 12-6
  • 13-2
• A+
• Galileo
• Moby Max
	6.RP.A.2
	Understand the concept of a unit rate *a/b* associated with a ratio *a:b* with *b* ≠ 0, and use rate language in the context of a ratio relationship.
	For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar,
		Bloom: Application & Comprehension
		
		Hess: DOK Level 2
		
		EQ:
		• What are ratios and rates and how are
			I will be able to:
			• understand the concept of a unit rate *a/b* associated with a ratio *a:b* with *b* ≠ 0
			• use rate language in the context of a ratio relationship
			•
				• rate
				• unit rate
				•

• Versa-Tiles • Manipulatives • Worksheets • Games •	*so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."* (Note: Expectations for unit rates in this grade are limited to non-complex fractions.)	they used in solving problems? • What procedures can be used to solve proportions? •		
	6.RP.A.3			•

• ConnectED
• enVision
  • 12-2
  • 13-1
  • 13-3
  • 13-4
  • 14-1
  • 14-2
  • 14-4
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.RP.A.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.
		Bloom: Application
		
		Hess: DOK Level 2 & 3
		
		EQ:
		• What are ratios and rates and how are they used in solving problems?
		• What procedures can be used to solve proportions?
		• What is the meaning of percent?
		• How can percent be estimated and found?
		•
			I will be able to:
			• 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
			•
			•
				• proportion
				• fraction
				• decimal
				• percent
				•

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	6.RP.A.3a			•

• ConnectED
• enVision
  • 13-1
  • 13-5
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.RP.A.3
	a. <mark>Make</mark> tables of equivalent ratios relating quantities with whole-number measurements, <mark>find</mark> missing values in the tables, and <mark>plot</mark> the pairs of values on the coordinate plane. <mark>Use</mark> tables to compare ratios
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		  • What procedures can be used to solve proportions?
		  •
			I will be able to:
			  • make tables of equivalent ratios relating quantities with whole-number measurements
			  • find missing values in the tables
			  • plot the pairs of values on the coordinate plane
			  • use tables to compare ratios
			  •
				•
				•

	6.RP.A3b			•

• ConnectED
• enVision
  • 12-4
  • 13-2
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
	6.RP.A.3
	b. <mark>Solve</mark> unit rate problems including those involving unit pricing and constant speed. *For example, 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?*
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		  • What are ratios and rates and how are they used in solving problems?
			I will be able to:
			  • solve unit rate problems including those involving unit pricing and constant speed
			  •
				• rate
				• unit rate
				•

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		• What procedures can be used to solve proportions? •		
	6.RP.A.3c			•
• ConnectED • enVision • 14-3 • 14-5 • 14-6 • 14-7 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	6.RP.A.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.	Bloom: Application Hess: DOK Level 2 EQ: • What is the meaning of percent? • How can percent be estimated and found? •	I will be able to: • 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 •	• percent • • •
	6.RP.A.3d			•
• ConnectED • enVision • 16-1 • 16-2 • 16-3	6.RP.A.3 d. Use ratio reasoning to convert measurement units; manipulate and transform units	Bloom: Application Hess: DOK Level 2 EQ:	I will be able to: • use ratio reasoning to convert measurement units • manipulate units appropriately when	• capacity • meter • gram • liter • kilo-

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• 16-4 • 16-5 • 16-6 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	appropriately when multiplying or dividing quantities.	• How can customary and Metric measurements be converted to other units? • How are customary and Metric units related? •	multiplying or dividing quantities • transform units appropriately when multiplying or dividing quantities •	• centi- • milli- •
	6.NS.A.1			•

• ConnectED
• enVision
  • 5-4
  • 5-5
  • 5-6
  • 6-1
  • 6-2
  • 6-3
  • 6-4
  • 9-1
  • 9-2
  • 9-3
  • 9-4/9-5
	6.NS.A.1
	Interpret and compute **quotients** of **fractions**, and solve word problems involving <u>division</u> of **fractions** by **fractions**, e.g., by using visual fraction models and equations to represent the problem.
	For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because 3/4 of 8/9 is 2/3. (In general, $(a/b) \div (c/d) =$
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		• How can numbers be broken apart into factors?
		• How can fractions be represented and simplified?
		• How are decimals and fractions related?
			I will be able to:
			• interpret quotients of fractions
			• compute quotients of fractions
			• solve word problems involving division of fractions by fractions
			•
			
			ACTIVITIES
				• fraction
				• numerator
				• denominator
				• equivalent fractions
				• simplest form; lowest terms; simplifying; reducing
				• proper fraction
				• improper fraction
				• mixed number

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• A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives *Cuisenaire Rods* • Worksheets • Games •	*ad/bc) 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?* Pretest 5-4 Understanding Fractions x2 days 5-5 Equivalent Fractions 5-6 Fractions in Simplest Form 6-1 Fractions and Division 6-2 Fractions and Decimals 6-3 Improper Fractions and Mixed Numbers x2 days 6-4 Decimal Forms of Fractions and Mixed Numbers 9-1 Understanding Division of Fractions 9-2 Dividing a Whole Number by a Fraction 9-3 Dividing Fractions 9-4 Estimating Quotients 9-5 Dividing Mixed Numbers Post Test	• What are standard procedures for estimating and finding products of fractions and mixed numbers? • What are standard procedures for estimating and finding quotients of fractions and mixed numbers? •	• Foldable comparing Improper and Mixed Numbers •	• terminating decimal • repeating decimal • like denominators • unlike denominators • least common denominator (LCD) • reciprocals •

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	6.NS.B.2			•

• ConnectED
• enVision
  • 3-5
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
	6.NS.B.2
	Fluently <mark>divide</mark> multi-digit **numbers using** the standard algorithm.
	
	Pretest
	
	Include the different ways how to write multiplication/division
	
	Subtraction with Regrouping
	Multiplication Facts
	Multi-digit Multiplication
	3-5 Dividing Whole Numbers
	  • Traditional Method
	  • Partial Quotients
	  • Double Down
	
	Post Test
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		  • What are whole numbers place values?
		  • How can whole numbers be written, compared, and ordered?
			I will be able to:
			  • subtract with regrouping
			  • multiply multi-digit numbers
			  • divide multi-digit numbers
			  • use standard algorithm
			  • use Algebra notation to show different ways to write multiplication and division
			
			ACTIVITIES:
			  • KAGAN Gallery Walk
			  • Smart Board Sort Activity – Algebra Notation for multiplication and division
			  •
				• divisor
				• dividend
				• quotient
				• Traditional Method
				• Partial Quotients
				• Double Down Division
				•

	6.NS.B.3			•

• ConnectED
• enVision
  • 1-4
	6.NS.B.3	Bloom: Application
		
		Hess: DOK Level 2
			I will be able to:
			  • add multi-digit decimals
			  • subtract multi-digit decimals
				• decimal
				• tenths
				• hundredths

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• 1-5 • 1-6 • 3-1/3-2 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	Fluently <mark>add</mark>, <mark>subtract</mark>, <s>multiply</s>, and <mark>divide</mark> multi-digit **decimals** <mark>using</mark> the standard algorithm for each operation. Pretest 1-4 Decimal Place Value 1-6 Comparing and Ordering Decimals 3-1 Estimating Sums and Differences 3-2 Adding and Subtracting Decimals Post Test	EQ: • What are whole numbers/decimal place values? • How can whole numbers/decimals be written, compared, and ordered? • How are sums and differences involving decimals estimated and found?	• use standard algorithm • ACTIVITIES: • Adding and Subtracting Decimals foldable •	• thousandths • periods • estimate • rounding • compatible numbers • terminating decimals • repeating decimals

• ConnectED
• enVision
  • 1-4 (**Review**)
  • 3-3/3-4
  • 3-6
  • 3-7
• A+
• Galileo
• Moby Max
• Versa-Tiles
	6.NS.B.3
	Fluently <mark>add</mark>, <s>subtract</s>, <mark>multiply</mark>, and <mark>divide</mark> multi-digit **decimals** <mark>using</mark> the standard algorithm for each operation.
	
	Pretest
	
	1-4 Decimal Place Value (**Review**)
	1-5 Multiplying and Dividing by 10, 100, and 1,000
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		• What are whole numbers/decimal place values?
		• How can whole numbers/decimals be written,
			I will be able to:
			• multiply multi-digit decimals
			• divide multi-digit decimals
			• use standard algorithm
			•
			
			ACTIVITIES:
			• Multiplying, Dividing Decimals foldable
				• decimal
				• tenths
				• hundredths
				• thousandths
				• periods
				• estimate
				• rounding
				• compatible numbers
				• terminating decimals

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• Manipulatives • Worksheets • Games •	3-3 Estimating Products and Quotients 3-4 Multiplying Decimals 3-6 Dividing by a Whole Number 3-7 Dividing Decimals Post Test	compared, and ordered? • How are products, and quotients involving decimals estimated and found?	•	• repeating decimals
	DIVISIBILITY RULES Pretest Day 1 – 2, 5, 10 Day 2 – 3, 9, 6 Day 3 – 4, 8 Day 4 – Challenge and Review Post Test		How do you know a number is divisible by _____? Your brain is a pattern-seeking organ.	
	Prime #'s		ACTIVITIES: • Eratosthenes's Sieve • Prime #'s 1-100 • Poster for hallway • Smart Board activity – reveals prime numbers •	• factor • prime • composite

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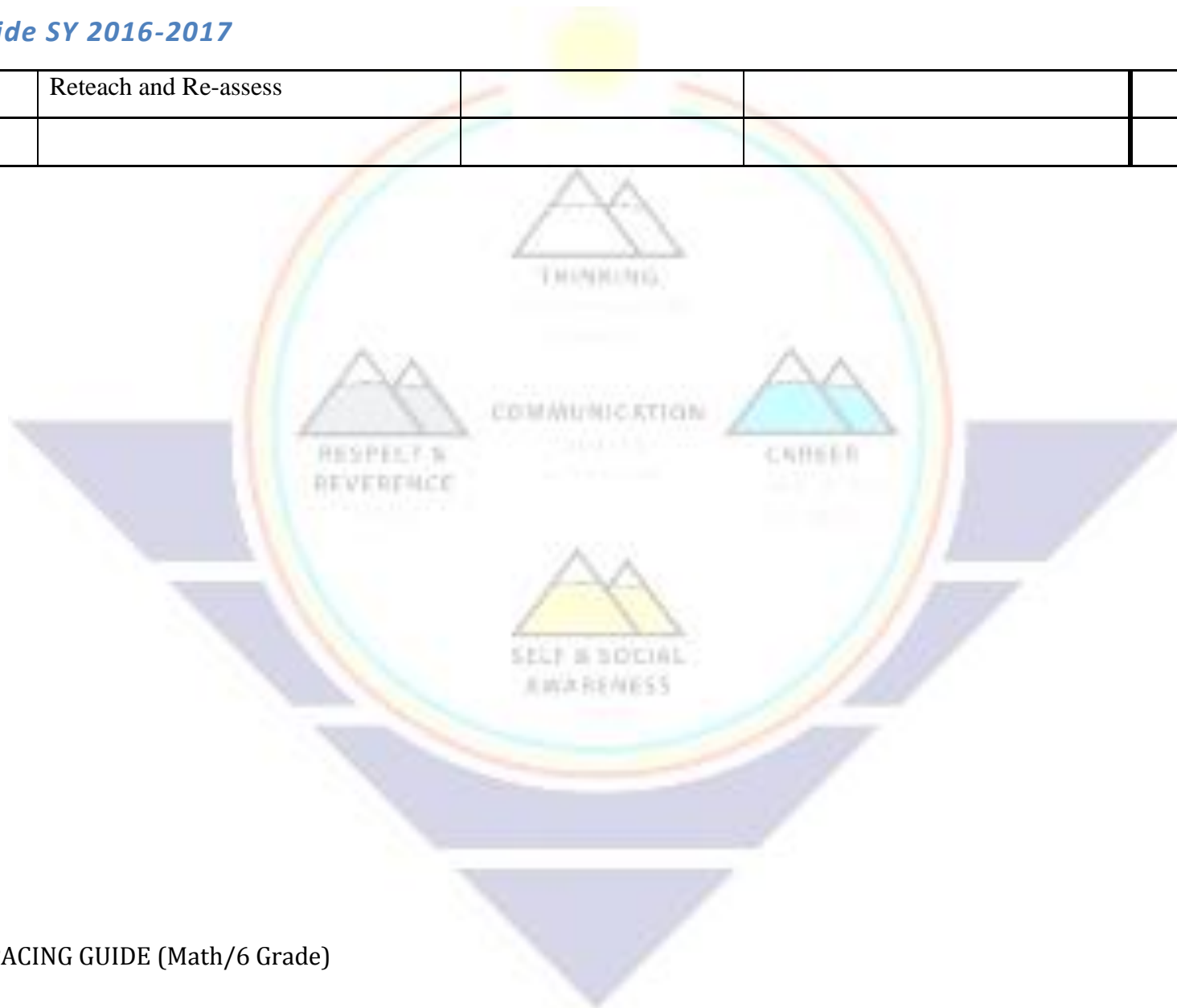|	6.NS.B.4			•
• ConnectED • enVision 　• 5-1 　• 5-2 　• 5-3 　• 5-7 　• 7-2 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	6.NS.B.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4(9 +2). Pretest 5-1　　Factors, Multiples, and Divisibility 5-2　　Prime Factorization 5-3　　GCF x2 days 7-2　　LCM x2 days Post Test	Bloom: Application Hess: DOK Level 2 EQ: • How can numbers be broken apart into factors? • How can fractions be represented and simplified? • What are standard procedures for estimating and finding sums and differences of fractions and mixed numbers? •	I will be able to: • find the GCF of 2 whole numbers ≤ 100 • find the LCM of 2 whole numbers ≤ 12 • use the distributive property to express the sum of 2 whole numbers • ACTIVITIES: • Factor "Trees" for the hallway • Foldable comparing GCF and LCM •	• factor • multiple • divisible • prime number • composite number • prime factorization • factor tree • greatest common factor (GCF) • common multiple • least common multiple (LCM) •
Q1 - Week 8	Reteach and Re-assess			•
Q1 - Week 9	Reteach and Re-assess			•

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Q1 - Week 10	Reteach and Re-assess		•

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QUARTER TWO				
Q2 - WEEK 1	6.NS.C.5			•

• ConnectED
• enVision
   • 10-1
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
	6.NS.C.5
	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
	
	10-1 Understanding Integers
		Bloom: Application & Comprehension
		
		Hess: DOK Level 2
		
		EQ:
		  • How are integers related to whole numbers?
		  •
			I will be able to:
			  • understand that +/- numbers are used to describe quantities having opposite directions or values
			  • use +/- numbers to represent quantities in real-world context
			  • explain the meaning of 0 in each situation
			  •
			
			ACTIVITIES
			  • Use number lines both horizontally and vertically
			  • Include positive and negative numbers
			  • Foldable – showing different positive/negative examples
			  •
				• opposites
				• integers
				• absolute value
				•

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	6.NS.C.6			•

• ConnectED
• enVision
  • 10-1
  • 10-3
  • 10-9
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	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.
		Bloom: Application & Comprehension
		
		Hess: DOK Level 2
		
		EQ:
		  • How are integers related to whole numbers?
		
		  •
			I will be able to:
			  • understand a rational number as a point on the number line
			  • extend number line diagrams and coordinate axes familiar from previous grades
			  • the
			
			ACTIVITIES
			  • Humvee (HV); (x,y)
			
			  •
				• opposites
				• integers
				• absolute value
				• rational number
				• coordinate plane
				• x-axis
				• y-axis
				• quadrants
				• ordered pair
				• origin
				•

	6.NS.C.6a			•

• ConnectED
• enVision
  • 10-1
  • 10-8
• A+
• Galileo
• Moby Max
	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 the opposite of a number is the number itself, e.g.,
		Bloom: Comprehension
		
		Hess: DOK Level 2
		
		EQ:
			I will be able to:
			  • recognize opposite signs of numbers indicating locations on opposite sides of 0
			  • recognize that the opposite of the opposite of a number is the number itself
				• opposites
				• integers
				• absolute value
				•

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• Versa-Tiles • Manipulatives • Worksheets • Games •	$-(-3) = 3$, and that 0 is its own opposite.	• How are integers related to whole numbers? •	•	
	6.NS.C.6b			•

• ConnectED
• enVision
  • 10-8
  • 10-9
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.NS.C.6
	b. <mark>Understand</mark> signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; <mark>recognize</mark> that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
		Bloom: Comprehension
		
		Hess: DOK Level 2
		
		EQ:
		• How are integers related to whole numbers?
		•
			I will be able to:
			• understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane
			• recognize that when two ordered pairs differ only be signs, the locations of the points are related by <u>reflections</u> across one or both axes
			•
				• coordinate plane
				• x-axis
				• y-axis
				• quadrants
				• ordered pair
				• origin
				•

	6.NS.C.6c			•

• ConnectED
• enVision
  • 10-1
  • 10-3
	6.NS.C.6
	c. <mark>Find</mark> and <mark>position</mark> integers and other rational numbers on a horizontal or vertical number
		Bloom: Application
		
		Hess: DOK Level 1
		
		EQ:
			I will be able to:
			• find integers on a horizontal or vertical number line
				• opposites
				• integers
				• absolute value
				• rational number

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• 10-9 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	line diagram; <mark>find</mark> and <mark>position</mark> pairs of integers and other rational numbers on a coordinate plane.	• How are integers related to whole numbers? •	• position integers on a horizontal or vertical number line • find pairs of integers and other rational numbers on a coordinate plane • position pairs of integers and other rational numbers on a coordinate plane •	• coordinate plane • x-axis • y-axis • quadrants • ordered pair • origin •
	6.NS.C.7			•

• ConnectED
• enVision
   • 10-1
   • 10-2
   • 10-3
   • 10-8
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.NS.C.7
	<mark>Understand</mark> ordering and absolute value of rational numbers.
		Bloom: Comprehension
		
		Hess: DOK Level 2
		
		EQ:
		  • How are integers related to whole numbers?
		  •
			I will be able to:
			• understand ordering of rational numbers
			• understand absolute value of rational numbers
			•
				• opposites
				• integers
				• absolute value
				• rational number
				•

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	6.NS.C.7a			•

• ConnectED
• enVision
  • 10-2
  • 10-3
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.NS.C.7
	  a. **Interpret** statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.*
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		  • How are integers related to whole numbers?
		
		  •
			I will be able to:
			  • interpret statements of inequality as statements about the relative position of two numbers on a number line
			
			  •
				• rational number
				•

	6.NS.C.7b			•

• ConnectED
• enVision
  • 10-2
  • 10-3
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
	6.NS.C.7
	  b. **Write**, **interpret**, and **explain** statements of order for rational numbers in real-world contexts. *For example, write –3° C > –7° C to express the fact that –3° C is warmer than –7° C.*
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		  • How are integers related to whole numbers?
		
		  •
			I will be able to:
			  • write statements of order for rational numbers in real-world context
			  • interpret statements of order for rational numbers in real-world context
			  • explain statements of order for rational numbers in real-world context
			
			  •
				• rational number
				•

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•		6.NS.C.7c			•

• ConnectED
• enVision
   • 10-1
   • 10-8
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
		6.NS.C.7
		  c. <mark>Understand</mark> the absolute value of a rational number as its distance from 0 on the number line; <mark>interpret</mark> absolute value as magnitude for a positive or negative quantity in a real-world situation.
		For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.
			Bloom: Comprehension & Application
			
			Hess: DOK Level 2
			
			EQ:
			  • How are integers related to whole numbers?
			  •
				I will be able to:
				  • understand the absolute value of a rational number as its distance from 0 on a number line
				  • interpret absolute value as magnitude for a +/- quantity in a real-world situation
				  •
					• opposites
					• integers
					• absolute value
					•

		6.NS.C.7d			•

• ConnectED
• enVision
   • 10-8
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
		6.NS.C.7
		  d. <mark>Distinguish</mark> comparisons of absolute value from statements about order.
		For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.
			Bloom: Application & Comprehension
			
			Hess: DOK 2
			
			EQ:
			  • How are integers related to whole numbers?
				I will be able to:
				  • distinguish comparisons of absolute value from statements about order
				  •
				  •
					• absolute value
					•

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• Games •		•	
	6.NS.C.8		•
• ConnectED • enVision • 10-9 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	6.NS.C.8 <mark>Solve</mark> real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. <mark>Include</mark> use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate	Bloom: Application Hess: DOK Level 2 EQ: • How are integers related to whole numbers? •	I will be able to: • solve real-world problems by graphing points in all four quadrants of the coordinate plane • solve mathematical problems by graphing points in all four quadrants of the coordinate plane • include use of coordinates to find distances between points with the same first coordinate or the same second coordinate • include use of absolute value to find distances between points with the same first coordinate or the same second coordinate •	• coordinate plane • x-axis • y-axis • quadrants • ordered pair • origin •
	6.NS.C.9		•
• ConnectED • enVision • None	6.NS.C.9:	Bloom: Application Hess: DOK Level 2	I will be able to: • convert between expressions for + rational numbers	• fraction • decimal • percent

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• A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	<mark>Convert</mark> between expressions for positive rational numbers, including fractions, decimals, and percents.	EQ: •	including fractions, decimals, and percents • *While **reviewing** decimals and fractions, throw in percents!*	
	6.EE.A.1			•

• ConnectED
• enVision
  • 1-1
  • 1-2
  • 1-3
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.EE.A.1
	<mark>Write</mark> and <mark>evaluate</mark> numerical expressions involving whole-number exponents.
	
	Pretest
	
	1-1 Place Value
	1-2 Comparing and Ordering
	        Whole Numbers
	1-3 Exponents and Place Value
	
	Post Test
		Bloom: Application & Evaluation
		
		Hess: DOK Level 2 & 3
		
		EQ:
		• What are whole numbers place values?
		• How can whole numbers be written, compared, and ordered?
		•
			I will be able to:
			• read and write numbers to trillions in standard, expanded, and word form and give the values of specific digits
			• write numerical expressions involving whole-number exponents
			• evaluate numerical expressions involving whole-number exponents
			•
			
			ACTIVITIES:
			•
				• standard form
				• expanded form
				• word form
				• trillion
				• period
				• base
				• exponent
				• power
				• exponential form
				• squared
				• cubed
				• root
				•

Ganado Unified School District

Math/6 Grade

	6.EE.A.2			•

• ConnectED
• enVision
    • 2-1
    • 2-6
    • 2-7
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
    bookmarks
• Worksheets
• Games
•
	6.EE.A.2
	<mark>Write</mark>, <mark>read</mark>, and <mark>evaluate</mark> expressions in which letters stand for numbers.
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		• What are algebraic expressions and how can they be written and evaluated?
		• What arithmetic number relationships, called properties, are always true?
		•
			I will be able to:
			• write expressions in which letters stand for numbers
			• read expressions in which letters stand for numbers
			• evaluate expressions in which letters stand for numbers
			•
			
			ACTIVITIES:
			•
				• variable
				• term
				• variable term
				• constant term
				• coefficient
				• algebraic expression
				• evaluate
				• substitution
				• input/output table
				•

	6.EE.A.2a			•

• ConnectED
• enVision
    • 2-1
    • 2-6
    • 2-7
• A+
• Galileo
• Moby Max
	6.EE.A.2
	a. <mark>Write</mark> expressions that record operations with numbers and with letters standing for numbers.
	For example, express the calculation "Subtract y from 5" as 5 − y.
		Bloom: Application & Evaluation
		
		Hess: DOK Level 2
		
		EQ:
		• What are algebraic expressions and
			I will be able to:
			• write expressions that record operations with numbers and with letters standing for numbers
			•
			
			ACTIVITIES:
				• variable
				• term
				• variable term
				• constant term
				• coefficient
				• algebraic expression
				• evaluate

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• Versa-Tiles • Manipulatives *bookmarks* • Worksheets • Games •		how can they be written and evaluated? • What arithmetic number relationships, called properties, are always true? •	•	• substitution • input/output table •
	6.EE.A.2b			•

• ConnectED
• enVision
  • 2-1
  • 2-6
  • 3-8
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
  bookmarks
• Worksheets
• Games
•
	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. *For example, 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*
		Bloom: Comprehension Evaluation & Application
		
		Hess: DOK Level 1
		         DOK Level 3
		
		EQ:
		  • What are algebraic expressions and how can they be written and evaluated?
		  • What arithmetic number relationships,
			I will be able to:
			  • identify parts of an expression using mathematical terms
			  • view one or more parts of an expression as a single entity
			  •
			
			ACTIVITIES:
			  •
				• factor
				• variable
				• term
				• variable term
				• constant term
				• coefficient
				• algebraic expression
				• evaluate
				• substitution
				•

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		called properties, are always true? •		•
	6.EE.A.2c			•
• ConnectED • enVision 　• 2-1 　• 2-6 　• 3-8 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives 　*bookmarks* • Worksheets • Games •	6.EE.A.2 　c. <mark>Evaluate</mark> expressions at specific values of their variables. <mark>Include</mark> expressions that arise from formulas used in real-world problems. <mark>Perform</mark> arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). 　*For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length s = ½*	Bloom: Comprehension Evaluation & Application Hess: DOK Level 3 EQ: • What are algebraic expressions and how can they be written and evaluated? • What arithmetic number relationships, called properties, are always true? •	I will be able to: • 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 (Order of Operations) • ACTIVITIES: •	• factor • variable • term • variable term • constant term • coefficient • algebraic expression • evaluate • substitution •
	6.EE.A.3			•

Ganado Unified School District

Math/6 Grade

• ConnectED
• enVision
  • 2-2
  • 2-3
  • 2-4
  • 2-6
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.EE.A.3
	==Apply== the properties of operations to generate equivalent expressions. *For example, 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.*
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		• What are algebraic expressions and how can they be written and evaluated?
		• What arithmetic number relationships, called properties, are always true?
		•
			I will be able to:
			• apply the properties of operations to generate equivalent expressions
			
			•
			
			ACTIVITIES:
			• (**Review**) Board Sort Activity – Algebra Notation for multiplication and division
			•
				• Commutative Property of Addition
				• Commutative Property of Multiplication
				• Associative Property of Addition
				• Associative Property of Multiplication
				• Identity Property of Addition
				• Identity Property of Multiplication
				• Order of Operations
				• Distributive Property
				• evaluate
				• substitution
				• equation

	6.EE.A.4			•
• ConnectED	6.EE.A.4	Bloom: Comprehension	I will be able to:	• equation

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Math/6 Grade

• enVision
   • 4-1
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
	<mark>Identify</mark> when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).
	For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.
		Hess: DOK Level 2
		
		EQ:
		   • What procedures can be used to solve equations?
		
		   •
			• identify when two expression are equivalent
			
			•
				• Addition Property of Equality
				• Subtraction Property of Equality
				• Multiplication Property of Equality
				• Division Property of Equality
				•

	6.EE.B.5			•

• ConnectED
• enVision
   • 3-9
   • 4-2
   • 4-4
   • 15-6
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
	6.EE.B.5
	<mark>Understand</mark> 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? <mark>Use</mark> substitution to determine whether a given number in a specified set makes an equation or inequality true.
		Bloom: Comprehension & Application
		
		Hess: DOK Level 2
		
		EQ:
		   • How are sums, differences, products, and quotients involving decimals estimated and found?
			I will be able to:
			   • understand solving an equation or inequality as a process of answering a question
			   • use substitution to determine whether a given number in a specified set makes an equation or inequality true
			
			   •
				• inequality
				• inverse relationship
				•

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• Worksheets • Games •		• What procedures can be used to solve equations? • How can equations be graphed? • What patterns can be found in the graphs of equations? •		
	6.EE.B.6			•

• ConnectED
• enVision
   • 2-1
   • 3-9
   • 4-2
   • 4-4
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	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 specific set.
		Bloom: Comprehension & Application
		
		Hess: DOK Level 2
		
		EQ:
		• What are algebraic expressions and how can they be written and evaluated?
		• What arithmetic number relationships,
			I will be able to:
			• use variables to represent numbers
			• write expressions when solving a real-world
			• write expressions when solving mathematical problem
			• understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specific set
			•
				• variable
				• coefficient
				• algebraic expression
				• inequality
				• inverse relationship
				•

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Math/6 Grade

		called properties, are always true? • How are sums, differences, products, and quotients involving decimals estimated and found? • What procedures can be used to solve equations? •		
	6.EE.B.7			•

• ConnectED
• enVision
  • 4-1
  • 4-2
  • 4-4
  • 9-6
  • 15-1
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
	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.
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		• What procedures can be used to solve equations?
		• What are standard procedures for estimating and finding quotients
			I will be able to:
			• solve real-world problems by writing equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers
			• solve mathematical problems by solving equations of the form $x + p$ $= q$ and $px = q$ for cases in which p, q and x are all
				• equation
				• Addition Property of Equality
				• Subtraction Property of Equality
				• Multiplication Property of Equality

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• Games •		• of fractions and mixed numbers? • How can equations be graphed? • What patterns can be found in the graphs of equations? •	nonnegative rational numbers •	• Division Property of Equality • inverse relationship •
Q2 - Week 8	Reteach and Re-assess			•
Q2 - Week 9	Reteach and Re-assess			•
Q2 - Week 10	Reteach and Re-assess			•
		QUARTER THREE		
Q3 – Week 1	6.EE.B.8			•
• ConnectED • enVision • 15-6 • A+ • Galileo • Moby Max	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 $x < c$	Bloom: Application & Comprehension Hess: DOK Level 2 EQ:	I will be able to: • write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem	• inequality •

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• Versa-Tiles • Manipulatives • Worksheets • Games •	have infinitely many solutions; represent solutions of such inequalities on number line diagrams	• How can equations be graphed? • What patterns can be found in the graphs of equations? •	• recognize hat inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams •	
	6.EE.C.9			•

• ConnectED
• enVision
   • 15-2
   • 15-3
   • 15-4
   • 15-5
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	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. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.
	For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between
		Bloom: Application & Analysis
		
		Hess: DOK Level 3
		
		EQ:
		• How can equations be graphed?
		• What patterns can be found in the graphs of equations?
		•
			I will be able to:
			• 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
			• analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation
			•
				• formula
				• T-table
				• linear equation
				• dependent variable
				• independent variable
				•

Ganado Unified School District

Math/6 Grade

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	distance and time.			
	6.G.A.1			•
• ConnectED • enVision • 8-5 • 11-2 • 11-4 • 11-5 • 17-2 • 17-3 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	6.G.A.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.	Bloom: Application Hess: DOK Level 2 EQ: • What are standard procedures for estimating and finding products of fractions and mixed numbers? • How can angles be measured, drawn, and classified? • What are special shapes and how can they be described and compared? • What are the meanings of perimeter and area? • How can the perimeter and area of certain shapes be found?	I will be able to: • find the area of right triangles • find the area of other triangles • find the area of special quadrilaterals • find the area of polygons by composing into rectangles • find the area of polygons by decomposing into triangles and other shapes • apply these techniques in the context of solving real-world problems • apply these techniques in the context of solving mathematical problems •	• vertex • acute angle • right angle • obtuse angle • straight angle • acute triangle • right triangle • obtuse triangle • equilateral triangle • isosceles triangle • scalene triangle • trapezoid • parallelogram • rhombus • rectangle • square • area • length • width • 2-dimensional figures

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	6.G.A.2			•

• ConnectED
• enVision
  • 18-3
  • 18-4
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.G.A.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 $V = l\,w\,h$ and $V = b\,h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		• What is the meaning of volume and how can volume be found?
		• What is the meaning of surface area and how can surface area be found?
		• How can the volume of certain figures be found?
		
		•
			I will be able to:
			• 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
			• show that the volume is the same as would be found by multiplying the edge lengths of the prism
			• apply the formulas $V = l\,w\,h$ and $V = b\,h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems
			
			•
				• formula
				• volume
				• cubed
				•

	6.G.A.3			•

• ConnectED
• enVision
  • 10-10
  • 11-1
• A+
• Galileo
• Moby Max
	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
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
			I will be able to:
			• 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
				• point
				• line
				• ray
				• line segment
				• congruent line segments
				• midpoint

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• Versa-Tiles • Manipulatives • Worksheets • Games •	the context of solving real-world and mathematical problems.	• How are integers related to whole numbers? • How can angles be measured, drawn, and classified? • What are special shapes and how can they be described and compared? •	coordinate or the same second coordinate • apply these techniques in the context of solving real-world and mathematical problems •	• intersecting lines • plane • parallel lines • perpendicular lines •
	6.G.A.4			•

• ConnectED
• enVision
  • 18-1
  • 18-2
  • 18-5
• A+
• Galileo
• Moby Max
• Versa-Tiles
	6.G.A.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.
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		  • What is the meaning of area?
			I will be able to:
			• represent three-dimensional figures using nets made up of rectangles and triangles
			• use the nets to find the surface area of these figures
			• apply these techniques in the context of solving real-
				• cone
				• cylinder
				• edge
				• faces
				• net
				• polyhedron
				• prism
				• pyramid
				• sphere

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• Manipulatives • Worksheets • Games •		• How can the area of certain shapes be found? • What is the meaning of volume and how can volume be found? • What is the meaning of surface area and how can surface area be found? • How can the volume of certain figures be found?	world and mathematical problems •	• vertex • surface area • length • width • height • 3-dimensional figures
	6.SP.A.1			•
• ConnectED • enVision • 19-1 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games	6.SP.A.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one*	Bloom: Comprehension Hess: DOK Level 1 EQ: • How can graphs be used to represent data and answer questions? •	I will be able to: • recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers •	• statistical question •

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•	*anticipates variability in students' ages.*			
	6.SP.A.2			•
• ConnectED • enVision • 19-2 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	6.SP.A.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.	Bloom: Comprehension Hess: DOK Level 1 EQ: • How can graphs be used to represent data and answer questions? •	I will be able to: • 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 •	• data distribution • outlier •
	6.SP.A.3			•
• ConnectED • enVision • 19-3 • 19-7 • 19-10 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives	6.SP.A.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.	Bloom: Comprehension Hess: DOK Level 2 EQ: • How can graphs be used to represent data and answer questions? •	I will be able to: • 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 •	• mean • average • absolute deviation • interquartile range (IQR) • mean absolute deviation •

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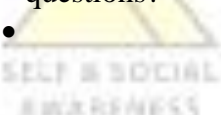|				
• Worksheets • Games •				
	6.SP.B.4			•

• ConnectED
• enVision
   • 19-5
   • 19-6
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.SP.B.4
	<mark>Display</mark> numerical data in plots on a number line, including dot plots, histograms, and box plots.
		Bloom: Application
		
		Hess: DOK Level 2
		
		EQ:
		  • How can graphs be used to represent data and answer questions?
		  •
			I will be able to:
			  • display numerical data in plots on a number line, including dot plots
			  • display numerical data in plots on a number line, including histograms
			  • display numerical data in plots on a number line, including box plots
			  •
				• frequency table
				• histogram
				• box plot
				• quartiles
				•

	6.SP.B.5			•

• ConnectED
• enVision
   • 19-8
   • 19-9
• A+
• Galileo
	6.SP.B.5
	<mark>Summarize</mark> numerical data sets in relation to their context, such as by:
		Bloom: Synthesis
		
		Hess: DOK Level 2 & 3
		
		EQ:
			I will be able to:
			  • summarize numerical data sets in relation to their context
			  •
				•
				•

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• Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •		• How can graphs be used to represent data and answer questions? •		
	6.SP.B.5a			•

• ConnectED
• enVision
   • 19-5
   • 19-9
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.SP.B.5
	  a. <mark>Reporting</mark> the number of observations.
		Bloom: Synthesis
		
		Hess: DOK Level 2 & 3
		
		EQ:
		  • How can graphs be used to represent data and answer questions?
		
		•
			I will be able to:
			  • report the number of observations
			
			•
				• frequency table
				• histogram
				•

	6.SP.B.5b			•

• ConnectED
• enVision
   • 19-1
   • 19-9
• A+
	6.SP.B.5
	  b. <mark>Describing</mark> the nature of the attribute under investigation, including how it was measured and its units of measurement.
		Bloom: Synthesis
		
		Hess: DOK Level 2 & 3
		
		EQ:
			I will be able to:
			  • describe the nature of the attribute under investigation, including how it was
				• statistical question
				•

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			measured and its units of measurement	
• Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •		• How can graphs be used to represent data and answer questions? •	• •	
	6.SP.B.5c			•

• ConnectED
• enVision
  • 19-3
  • 19-4
  • 19-7
  • 19-9
• A+
• Galileo
• Moby Max
• Versa-Tiles
• Manipulatives
• Worksheets
• Games
•
	6.SP.B.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.
		Bloom: Synthesis
		
		Hess: DOK Level 2 & 3
		
		EQ:
		  • How can graphs be used to represent data and answer questions?
		  •
			I will be able to:
			  • Give quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation)
			  • describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered
			  •
				• mean
				• average
				• median
				• mode
				• range
				• absolute deviation
				• interquartile range (IQR)
				• mean absolute deviation
				•

	6.SP.B.5d			•
• ConnectED • enVision	6.SP.B.5	Bloom: Synthesis	I will be able to:	• •

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• 19-8 • 19-9 • A+ • Galileo • Moby Max • Versa-Tiles • Manipulatives • Worksheets • Games •	d. <mark>Relating</mark> the choice of measures of center and variability to the shape of the data distribution and the context in which the data was gathered.	Hess: DOK Level 2 & 3 EQ: • How can graphs be used to represent data and answer questions? •	• Relate the choice of measures of center and variability to the shape of the data distribution and the context in which the data was gathered • •	
Q3 - Week 8	Reteach and Re-assess			•
Q3 - Week 9	Reteach and Re-assess			•
Q3 - Week 10	Reteach and Re-assess			•

Ganado Unified School District

Math/6 Grade

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QUARTER FOUR			
Q4 – Week 1			•
Q4 – Week 2			•
Q4 – Week 3			•
Q4 – Week 4			•
Q4 – Week 5			•
Q4 – Week 6	7th Grade Standards???		•
Q4 - Week 7	7th Grade Standards???		•
			•
Q4 - Week 8			•
Q4 - Week 9			•
Q4 - Week 10			•
			•