

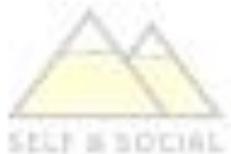
Ganado Unified School District

(Math/2nd Grade)

PACING Guide SY 2015-2016

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
Topics: 1-1-1-7 2-1-2-7	<p>2.OA.A.1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p> <p>M-2nd</p> <p>2.MP.1. Make sense of problems and persevere in solving them. 2.MP.2. Reason abstractly and quantitatively. 2.MP.3. Construct viable arguments and critique the reasoning of others. 2.MP.4. Model with mathematics. 2.MP.5. Use appropriate tools strategically. 2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>How can I solve one to two step addition and subtraction word problems within 100?</p> <p>How can I fluently add and subtract within 20 using mental strategies?</p>	<p>Write addition number sentences. Read and tell stories about joining. Write subtraction number sentences Read and tell stories about separating and comparing. Analyze the connection between addition and subtraction within 20 using mental strategies.</p>	<p>Part Whole Add Sum Addition sentences Plus Equals Join Subtract Difference</p>
Topic: 11	<p>2.NBT.B.9. Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.) 2.MP.2. Reason abstractly and quantitatively.</p> <p>2.MP.3. Construct viable arguments and critique the reasoning of others. 2.MP.4. Model with mathematics.</p>	<p>How do addition and subtraction strategies work using place value and the properties of operations?</p> <p>Explain by using drawings to support my answer.</p>	<p>Subtract/Add 0, 1, and 2 any given number. Use doubles fact to add/ subtract Use near doubles facts to add subtract Add in any order Add three numbers. Make 10 to add/ subtract Use objects to problem solve Think addition to 10 to subtract</p>	<p>Doubles Near doubles Addend Repeated addition</p>

	<p>2.MP.5. Use appropriate tools strategically.</p> <p>2.MP.7. Look for and make use of structure.</p> <p>2.MP.8. Look for and express regularity in repeated reasoning.</p>		<p>Think addition to 18 to subtract</p> <p>Use problem solving skills to decipher two question problem.</p>	
<p>Topic: 4-1 4-3</p>	<p>2.OA.C.4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.</p> <p>M-2nd</p> <p>2.MP.2. Reason abstractly and quantitatively.</p> <p>2.MP.3. Construct viable arguments and critique the reasoning of others.</p> <p>2.MP.7. Look for and make use of structure.</p> <p>2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>How can I add repeated numbers</p> <p>How can I build on arrays to add?</p> <p>How can I draw a picture to help me problem solve?</p>	<p>Use repeated addition</p> <p>Build on arrays to add</p> <p>Draw a picture and write a number sentence</p> <p>To problem solve</p>	<p>Array</p> <p>Repeated addition</p>
<p>Topic: 6-1 -6-5 7-2 -7-5 8-1 -8-9 9-1 -9-9</p>	<p>2.NBT.B.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p>M- 2nd</p> <p>2.MP.2. Reason abstractly and quantitatively.</p> <p>2.MP.7. Look for and make use of structure.</p> <p>2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>What are various ways I can fluently add and subtract within 100?</p> <p>How do addition and subtraction strategies work using place value and the properties of operation?</p> <p>How can I think addition to subtract?</p> <p>How can doubles facts help me to add and subtract?</p> <p>Why does it help to make 10 to solve subtraction problems?</p>	<p>Subtract/Add 0, 1, and 2 any given number.</p> <p>Use doubles fact to add/ subtract</p> <p>Use near doubles facts to add subtract</p> <p>Add in any order</p> <p>Add three numbers.</p> <p>Make 10 to add/ subtract</p> <p>Use objects to problem solve</p> <p>Think addition to 10 to subtract</p> <p>Think addition to 18 to subtract</p> <p>Use problem solving skills to decipher two question problem.</p>	<p>Doubles</p> <p>Near doubles</p> <p>Addend</p> <p>Number sentence</p>
<p>Topic: 2-6 3-1 – 3-6</p>	<p>2.OA.B.2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (See standard 1.OA.6 for a list of mental strategies.)</p>	<p>What are the sums of all two one digit numbers?</p>	<p>Identify the sums of all two one digit numbers.</p>	<p>Subtraction sentence</p> <p>Minus</p> <p>Separate</p> <p>More</p> <p>Fewer</p>

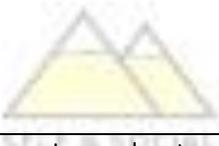
	<p>2.MP.2. Reason abstractly and quantitatively. 2.MP.7. Look for and make use of structure. 2.MP.8. Look for and express regularity in repeated reasoning</p>			Related Fact family
<p>Topic: 10-6-10-9 6-6</p>	<p>2.NBT.A.2. Count within 1000; skip-count by 5s, 10s, and 100s. M-3rd 2.MP.2. Reason abstractly and quantitatively. 2.MP.7. Look for and make use of structure. 2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>What does skip counting by 5s, 10s, and 100s mean?</p> 	Skip count by 2's, 5's, 10's, and 100's.	Skip counting
<p>2nd Quarter Topic: 10-5-10-9 6-6</p>	<p>2.NBT.A.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens—called a “hundred.” M-3rd 2.MP.2. Reason abstractly and quantitatively. 2.MP.7. Look for and make use of structure. 2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>What do the three digits of a three-digit number represent in amounts of hundreds, tens, and ones?</p> 	<p>Build models of numbers to 1,000. Count hundreds, tens, and ones.</p>	<p>Hundreds Thousands Ones Tens Digits Number word</p>
<p>Topic: 10-2-10-3 5-1-5-2</p>	<p>2.NBT.A.3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. M-3rd 2.MP.2. Reason abstractly and quantitatively. 2.MP.7. Look for and make use of structure. 2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>How do I read and write numbers to 1000 using base-ten numerals, number names, and expanded form?</p> 	Read and write numbers to 1,000.	<p>Expanded form Standard form Number word</p>
<p>Topic: 5-3</p>	<p>2.NBT.A.4. Compare two three-digit numbers based on meanings of the hundreds, tens,</p>	<p>How do I compare three-digit numbers based on meanings of the hundreds, tens, and</p>	Compare numbers using symbols.	Compare order

	<p>and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p> <p>2.MP.2. Reason abstractly and quantitatively. 2.MP.6. Attend to precision. 2.MP.7. Look for and make use of structure. 2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>ones digits, using $<$, $>$, and $=$ symbols?</p>		
<p><i>Topic:</i> 5- 6</p>	<p>OA.C.3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends</p> <p>2.MP.2. Reason abstractly and quantitatively. 2.MP.3. Construct viable arguments and critique the reasoning of others. 2.MP.7. Look for and make use of structure. 2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>How can I determine whether a group of objects has an odd or even number of numbers?</p>	<p>Determine whether a group of objects has an odd or even number of members</p>	<p>Odd Even</p>
<p>Topic: 7-1 , 10-4</p>	<p>2.NBT.B.8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p> <p>2.MP.2. Reason abstractly and quantitatively. 2.MP.7. Look for and make use of structure. 2.MP.8. Look for and express regularity in repeated reasoning.</p>	<p>How do I add mentally add and subtract help me solve math problems?</p>	<p>Mentally add and subtract 10 or 100 to a given number</p>	<p>Mental Math Subtract</p>
<p>Topic: 11-1 – 11-9</p>	<p>NBT.B.7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or</p>	<p>How do I add and subtract within 1000 using a variety of strategies? How does the relationship between addition and subtraction help me solve math problems?</p>	<p>Find parts of 100</p> <p>Add and subtract within 1000 using a variety of strategies.</p> <p>Use the relationship between addition and subtraction to help solve math problems</p>	<p>Add Subtract Concrete models Place value</p>

	<p>decompose tens or hundreds. <i>2.MP.2.</i> Reason abstractly and quantitatively.</p> <p><i>2.MP.4.</i> Model with mathematics.</p> <p><i>2.MP.5.</i> Use appropriate tools strategically.</p> <p><i>2.MP.7.</i> Look for and make use of structure.</p> <p><i>2.MP.8.</i> Look for and express regularity in repeated reasoning</p>			
<p>Topic: 7-1,10-4</p>	<p>2.MD.B.6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</p> <p>M-3rd</p> <p><i>2.MP.2.</i> Reason abstractly and quantitatively.</p> <p><i>2.MP.7.</i> Look for and make use of structure.</p> <p><i>2.MP.8.</i> Look for and express regularity in repeated reasoning</p>	<p>How do I represent whole numbers using a number line?</p> <p>How do I represent whole numbers in sums and differences within 100 using a number line?</p>	<p>I will represent whole numbers as length from 0 on a number line.</p>	<p>Regroup</p> <p>Number line</p>
<p>Topic: 10-1-10-2</p>	<p>2.NBT.A.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).</p> <p>M-3rd</p>	<p>What do the three digits of a three – digit number represent in amounts of hundreds, tens, and ones?</p>	<p>Build models of numbers to 1,000</p> <p>Count hundreds, tens and ones</p>	<p>Hundreds</p> <p>Thousands</p> <p>Ones</p> <p>Tens</p> <p>Digits</p> <p>Number word</p>
<p>3rd Quarter Topic: 12-1-12-4</p>	<p>2.G.A.1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (Sizes are compared directly or visually, not compared by measuring.)</p>	<p>How do I recognize different shapes?</p> <p>What are the parts of shapes I can identify?</p> <p>What is the difference between plan and different dimensional shapes?</p>	<p>Recognize different shapes</p> <p>Identify the parts of shapes</p> <p>Understand the difference between plan shapes and dimensional shapes</p>	<p>Pyramid</p> <p>Cylinder</p> <p>Cone</p> <p>Cube</p> <p>Rectangular prism</p> <p>Solid figure</p> <p>Flat surface</p> <p>Edge</p>

	<p>2.MP.4. Model with mathematics.</p> <p>2.MP.7. Look for and make use of structure.</p>			<p>Vertex/vertices</p> <p>Plan shapes</p> <p>Circle</p> <p>Square</p> <p>Triangle</p> <p>Rectangle</p> <p>Polygon</p> <p>Angle</p> <p>Side</p> <p>Quadrilateral</p> <p>Pentagon</p> <p>Hexagon</p> <p>Trapezoid</p> <p>Parallelogram</p>
<p>Topic:</p>	<p>2.G.A.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p> <p>2.MP.2. Reason abstractly and quantitatively.</p> <p>2.MP.6. Attend to precision.</p> <p>2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>How can I divide rectangles into equal parts</p> <p>How can I determine how many squares are needed to completely partition the rectangle?</p>	<p>Divide rectangles into equal squares.</p> <p>Determine how many squares are needed to completely partition the rectangle</p>	<p>Rows</p> <p>Columns</p> <p>Equal</p> <p>Unequal</p>
<p>Topic 12-7</p>	<p>2.G.A.3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words <i>halves</i>, <i>thirds</i>, <i>half of</i>, <i>a third of</i>, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p> <p>2.MP.2. Reason abstractly and quantitatively.</p> <p>2.MP.3. Construct viable arguments and critique the reasoning of others.</p> <p>2.MP.6. Attend to precision.</p> <p>2.MP.8. Look for and express regularity in repeated reasoning.</p>	<p>How can I determine whether a shape has been divided into equal or unequal parts?</p> <p>Why can shapes be identified using their parts like halves, thirds and fourths?</p>	<p>Determine whether a shape has been divided into equal or unequal parts</p> <p>Describe shapes using words like halves, thirds and fourths.</p>	<p>Equal</p> <p>Unequal</p> <p>Halves</p> <p>Thirds</p> <p>Fourths</p>
<p>Topic: 13-1- 13-5 14-1 – 14-4</p>	<p>2.MD.C.8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately.</p>	<p>How can I identify the value of a group of coins?</p>	<p>Solve word problems involving dollar, bills, and coins.</p>	<p>Coins</p> <p>Estimate</p> <p>Half a dollar</p>

	<p><i>Example: If you have 2 dimes and 3 pennies, how many cents do you have?</i> 2.MP.1. Make sense of problems and persevere in solving them.</p> <p>2.MP.2. Reason abstractly and quantitatively. 2.MP.4. Model with mathematics. 2.MP.5. Use appropriate tools strategically. 2.MP.8. Look for and express regularity in repeated reasoning.</p>	<p>How can I solve word problems involving dollar bills and coins? How can I use the dollar and cent sign appropriately? How can I show the same amount of money using different sets of coins? How can I make an organized list to find different combinations of coins?</p>	<p>Use dollar and cent signs appropriately.</p> <p>Show the same amount of money using different sets of coins.</p> <p>Make organized list to find different combinations of coins.</p>	<p>Quarter Dime Nickel Penny Cents \$ Greatest value Least value Even trade Dollar bill Dollar coin Decimal point Tally mark</p>
<p>4th quarter Topic: 15-1 – 15-9</p>	<p>2.MD.A.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</p> <p>2.MP.5. Use appropriate tools strategically. 2.MP.6. Attend to precision. 2.MP.7. Look for and make use of structure.</p>	<p>How can I measure the length of objects using nonstandard lengths? How can I estimate and measure items using inches? How can I measure length and height using centimeters?</p>	<p>Measure the length of objects using nonstandard lengths.</p> <p>Estimate and measure items using inches.</p> <p>Measure the length and height of objects using centimeters.</p>	<p>Unit Length Inch (in.) Width Height Nearest inch Centimeters Nearest centimeter</p>
<p>Topic: 15-1 -15-9</p>	<p>2.MD.A.2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.</p> <p>2.MP.2. Reason abstractly and quantitatively. 2.MP.3. Construct viable arguments and critique the reasoning of others. 2.MP.5. Use appropriate tools strategically. 2.MP.6. Attend to precision. 2.MP.7. Look for and make use of structure.</p>	<p>How can I measure the lengths and heights of objects using different units?</p>	<p>Measure the length and height of various objects using different units. Describe how the two measurements relate to the size of the unit chosen.</p>	<p>Length Height unit</p>
<p>Topic: 15-1 -15-9</p>	<p>.MD.A.3. Estimate lengths using units of inches, feet, centimeters, and meters. 2.MP.5. Use appropriate tools strategically.</p>	<p>How can I estimate and measure items that are about an inch, foot, and yard?</p>	<p>Use string and rulers to measure to the nearest inch the length of paths that are not straight.</p>	<p>meter</p>

	2.MP.6. Attend to precision	How can I use a string and rulers to measure to the nearest inch the length of paths that are not straight?		
Topic: 15-1 -15-9	2.MD.A.4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. 2.MP.5. Use appropriate tools strategically. 2.MP.6. Attend to precision.	How can I measure to compare length? 	Measure to compare lengths. Express the length differences in terms of a standard length unit.	
Topic: 15-1 -15-9	2.MD.B.5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem 2.MP.1. Make sense of problems and persevere in solving them. 2.MP.2. Reason abstractly and quantitatively. 2.MP.4. Model with mathematics. 2.MP.5. Use appropriate tools strategically. 2.MP.8. Look for and express regularity in repeated reasoning	How can I use addition/ subtraction to solve measurement problems? 	Use addition to solve measurement problems. 	
Topic : 16- 4	2.MD.D.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. 2.MP.4. Model with mathematics. 2.MP.5. Use appropriate tools strategically. 2.MP.6. Attend to precision. 2.MP.8. Look for and express regularity in repeated reasoning	How can I use rulers to measure objects and graph the results? How can I organize the lengths of objects in different ways?	Use rulers to measure objects and graph the results. Organize the lengths of objects in different ways	

<p>Topic: 16- 1-16-6</p>	<p>2.MD.D.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (See Table 1.)</p> <p>2.MP.1. Make sense of problems and persevere in solving them. 2.MP.2. Reason abstractly and quantitatively. 2.MP.4. Model with mathematics. 2.MP.5. Use appropriate tools strategically. 2.MP.6. Attend to precision. 2.MP.8. Look for and express regularity in repeated reasoning</p>	<p>How can I use a picture graphs and bar graph to solve problem?</p> <p>How can I make and use a pictograph to solve problems?</p> <p>How can I represent a set of data in a tally chart and in a bar graph?</p>	<p>Draw a picture graph to represent data.</p> <p>Draw a bar graph to represent data.</p> <p>Solve problems using information on a bar graph.</p>	<p>Data Bar graph Line plot Pictograph symbol</p>
<p>Topic : 16-1 – 16-2</p>	<p>2.MD.C.7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p> <p>2.MP.5. Use appropriate tools strategically. 2.MP.6. Attend to precision.</p>	<p>How can I tell time using a digital and analog clock?</p> <p>How can I read and express time in terms of quarters and half past an hour and before an hour?</p>	<p>Tell time to five minutes</p> <p>Tell time using a analog and digital clock</p> <p>Read and express time in terms of quarter and half past and before an hour.</p>	<p>Minute hand Hour hand Half past Quarter till Half hour</p>

Ganado Unified School District (Insert Subject/Grade Level)

PACING Guide SY 2014-2015

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
		COMMUNICATION		
	RESPECT & REVERENCE		CAREER	