Ganado Unified School District
Mathematics (Envisions)/Kindergarten

PACING Guide SY 2015-2016

Timeline & Resources (1st Quarter)	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary Content/Academic
TOPIC 1 **One to Five** *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow	**K.CC.A.3.** Write numbers from 0–20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). **K.CC.B.4.** Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. **K.CC.B.5.** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10	How can we show the numbers 1-5 in different ways? How can the numbers 1-5 be counted, read, and written?	I can read and write the numbers 1-5. I can count the numbers 1-5 in different ways. ***(Use Singapore math strategies for teaching number sense the first 5 weeks of school. Remember CPA; concrete, pictorial, and then the abstract numeral. Envisions jumps right into pictorial and abstract and we need to make the numbers concrete for students.)***	one, two, three, four, five, count

	things in a scattered configuration; given a number from 1–20, count out that many objects.			
TOPIC 2 Comparing and Ordering 0-5 *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives Websites: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com IPad Apps: -abcmouse -reading rainbow	**K.CC.B.4.** Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. **Understand that each successive number name refers to a quantity that is one larger.** **K.CC.C.6**. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Include groups with up to ten objects)	How can numbers 0-5 be compared and ordered? What mathematical tools could we use to visualize and represent the situation? What would happen if you join or take away 1?	I can say two numbers between 0-5 are more, less, or the same.	more than, less than, fewer, same, first, second, third, fourth, fifth
TOPIC 13 Sorting, Classifying, Counting, and Categorizing Data	**K.MD.B.3.** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Limit category counts to be less than or equal to 10).	What are different ways that objects can be grouped? What tool can you use to help you in this situation?	I can sort objects by color, shape, and size.	same, different, sort, does not belong, real graph, picture graph

*Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow		What is the relationship between ___ and ___?		
TOPIC 14 Identifying and Describing Shapes *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets -www.jump math.org	**K.G.A.2.** Correctly name shapes regardless of their orientations or overall size. **K.G.A.3.** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	How can shapes be named and described? What do you need to make this shape? Where do you see this shape in the real world?	I can name and describe shapes.	rectangle, square, circle, triangle, hexagon, cone, cylinder, sphere, cube, flat, solid, face, side, corner

-www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow				
Timeline & Resources (2nd Quarter)	**AZ College and Career Readiness Standard**	**Essential Question (HESS Matrix)**	**Learning Goal**	**Vocabulary Content/Academic**
TOPIC 3 **Six to Ten** *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow	**K.CC.A.3.** Write numbers from 0–20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). **K.CC.B.4.** Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. **b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.**	How can we show the numbers 0-10 in different ways? How can the numbers 0-10 be counted, read, and written?	I can read and write the numbers 0-10. I can count the numbers 0-10 in different ways. ***(Use Singapore math strategies for teaching number sense for numbers 6-10. Remember CPA; concrete, pictorial, and then the abstract numeral. Envisions jumps right into pictorial and abstract and we need to make the numbers concrete for students.)***	zero, one, two, three, four, five, six, seven, eight, nine, ten, count
TOPIC 4 **Comparing and Ordering Numbers 0-10** *Teacher Edition *Workbooks *Student edition Newspapers	**K.CC.C.6**. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Include groups with up to ten objects)	How can numbers 0-10 be compared and ordered? What mathematical tools could we use to visualize and represent the situation?	I can say two numbers between 0-10 are more, less, or the same.	more than, less than, fewer, same, first, second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth

*Various manipulatives Websites: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com IPad Apps: -abcmouse -reading rainbow	**K.CC.C.7**. Compare two numbers between 1 and 10 presented as written numerals.	What would happen if you join or take away 1? What would happen if you join or take away 2?		
TOPIC 15 Position and Location of Shapes *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives Websites: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com IPad Apps: -abcmouse	**K.G.A.1.** Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.	How can shapes be named and described? What do you need to make this shape? Where do you see this shape in the real world?	I can name and describe shapes no matter what size they are. I can use position words to say where shapes are.	Inside, outside, above, below, on, left, right, in front of, behind, next to, beside

-reading rainbow				
TOPIC 16 Analyzing, Comparing, and Composing Shapes *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow	**K.G.A.2.** Correctly name shapes regardless of their orientations or overall size. **K.G.A.3.** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	What do you need to make this shape? Look at this object, what shapes do you see in it? What shapes can you put together to make…? How can you make this shape? Using these shapes, what new shape can you make?	I can build models of shapes. I can put shapes together to make new shapes. I can name the shapes I see in different objects in the real world.	shape, roll, stack, slide, build, attribute blocks
Timeline & Resources (3rd Quarter)	**AZ College and Career Readiness Standard**	**Essential Question (HESS Matrix)**	**Learning Goal**	**Vocabulary Content/Academic**
TOPIC 5 Numbers to 20 *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives	**K.CC.A.2.** Count forward beginning from a given number within the known sequence (instead of having to begin at 1). **K.CC.B.4.** Understand the relationship between numbers and quantities; connect counting to cardinality.	How can we show the numbers 0-20 in different ways? How can the numbers 0-20 be counted, read, and written?	I can read and write the numbers 0-20. I can count the numbers 0-20 in different ways. I can show the numbers 0-20 using ten frames and base 10 blocks.	zero, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, ten frame, base 10

Websites: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com IPad Apps: -abcmouse -reading rainbow	a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. **b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.** c. Understand that each successive number name refers to a quantity that is one larger.		***(Singapore math strategies can be really helpful during this topic. Using the concrete manipulatives such a double ten frames, redenreck racks, base 10 blocks, and place value mats are vital to students understanding place value.)***	blocks, place value
TOPIC 6 **Number to 100** *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives Websites: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com IPad Apps: -abcmouse	**K.CC.A.1.** Count to 100 by ones and by tens. **K.CC.B.5.** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	How can we show the numbers 0-100 in different ways? How can the numbers 0-100 be counted, read, and written?	I can read and write the numbers 0-100. I can count the numbers 0-100 in different ways. I can show the numbers 0-100 using ten frames and base 10 blocks. ***(Singapore math strategies can be really helpful during this topic. Using the concrete manipulatives such a double ten frames, redenreck racks, base 10 blocks, and place value mats are vital to students understanding place value.)***	zero, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, one hundred about, hundred chart, row, column, skip counting by 2s, 5s, 10s, ten frame, base 10 blocks, place value

-reading rainbow				
TOPIC 7 **Understanding Addition** *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow	**K.0A.A.1**. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (Drawings need not show details, but should show the mathematics in the problems. This applies wherever drawings are mentioned in the Standards.) **K.0A.A.2**. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. **K.0A.A.5**. Fluently add and subtract within 5.	In what types of situations would you use addition? How can you solve this problem? What tools can you use to help you? What does this symbol mean? How could you demonstrate a counter-example?	I can solve addition problems in different ways. I can write addition sentences. I can tell stories about addition. ***(Use Singapore math strategies so that students can develop an understanding of the relationships between numbers by breaking them down into parts and putting them together to make a whole. If you use the concrete manipulatives during this time it will help students intuitively understand beginning addition and subtraction. After using manipulatives for a couple of days, move into adding pictures for a couple of days, and then the next week, move into the abstract part-part-whole model with number bonds. Last teach the addition and subtraction sentences.)***	number story, join, in all, altogether, add, plus sign, equal sign, sum, addition, addition sentence
TOPIC 8 **Understanding Subtraction** *Teacher Edition *Workbooks *Student edition Newspapers	**K.0A.A.1**. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (Drawings need not show details, but should show the mathematics in the problems. This	In what types of situations would you use subtraction? How can you solve this problem?	I can solve subtraction problems in different ways. I can write subtraction sentences. I can tell stories about subtraction.	number story, left, separate, take away, compare, subtract, minus sign, equal sign, subtraction sentence

*Various manipulatives Websites: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com IPad Apps: -abcmouse -reading rainbow	applies wherever drawings are mentioned in the Standards.) **K.0A.A.2**. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. **K.0A.A.5**. Fluently add and subtract within 5.	What tools can you use to help you? What does this symbol mean? How could you demonstrate a counter-example?	***(Use Singapore math strategies so that students can develop an understanding of the relationships between numbers by breaking them down into parts and putting them together to make a whole. If you use the concrete manipulatives during this time it will help students intuitively understand beginning addition and subtraction. After using manipulatives for a couple of days, move into adding pictures for a couple of days, and then the next week, move into the abstract part-part-whole model with number bonds. Last teach the addition and subtraction sentences.)***	
Timeline & Resources (4th Quarter)	**AZ College and Career Readiness Standard**	**Essential Question (HESS Matrix)**	**Learning Goal**	**Vocabulary Content/Academic**
TOPIC 9 **More Addition and Subtraction** *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives Websites: -enchanted learning	**K.0A.A.3**. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). **K.0A.A.4**. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	How could you prove that…? What steps did you take to get this solution? Can you show this number in a different way? What strategies do you need to solve this problem?	I can make 10 in many different ways including using ten frames and number bonds. I can find the missing part needed to make ten. ***(Use Singapore math strategies so that students can develop an understanding of the relationships between numbers by breaking them down into parts and putting them together to make a whole. If you use the***	whole, part, ten frame, number bond

-super teacher worksheets -www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow		Will it still work if…?	***concrete manipulatives during this time it will help students intuitively understand beginning addition and subtraction. After using manipulatives for a couple of days, move into adding pictures for a couple of days, and then the next week, move into the abstract part-part-whole model with number bonds. Last teach the addition and subtraction sentences.)***	
TOPIC 10 Composing Numbers 11 to 19 *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow	**K.NBT.A.1**. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	What number model can you use to solve this problem? What mathematical tools could you use to visualize and represent this number?	I can use ten frames and base 10 blocks to show the numbers 11-19. ***(Singapore math strategies can be really helpful during this topic. Using the concrete manipulatives such a double ten frames, redenreck racks, base 10 blocks, and place value mats are vital to students understanding place value.)***	compose, tens, ones, place value, ten frames, base 10 blocks

TOPIC 11 Decomposing Numbers 11 to 19 *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets -www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow	**K.NBT.A.1**. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	What number model can you use to solve this problem? What mathematical tools could you use to visualize and represent this number? How can we break the numbers 11-19 into parts?	I can use ten frames and base 10 blocks to break the numbers 11-19 into parts. ***(Singapore math strategies can be really helpful during this topic. Using the concrete manipulatives such a double ten frames, redenreck racks, base 10 blocks, and place value mats are vital to students understanding place value.)***	decompose, tens, ones, place value, ten frames, base 10 blocks
TOPIC 12 Measurement *Teacher Edition *Workbooks *Student edition Newspapers *Various manipulatives <u>Websites</u>: -enchanted learning -super teacher worksheets	**K.MD.A.1.** Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. **K.MD.A.2.** Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*	How can objects be compared and ordered by length, height, and weight? What tools would you use in this situation?	I can compare and order objects by length, height, and weight.	attribute, length, height, weight, shorter, longer, as long as, longest, shortest, taller, as tall as, holds more, holds less, empty, full, most, least, lighter, heavier, ruler, scale

-www.jump math.org -www.edu.com <u>IPad Apps</u>: -abcmouse -reading rainbow