GRADE Kindergarten Common Core State Standards – Critical Areas

In Kindergarten, instructional time should focus on two critical areas: (1) representing and comparing whole numbers, initially with sets of objects; (2) describing shapes and space. More learning time in Kindergarten should be devoted to number than to other topics.

(1) Students use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set; counting out a given number of objects; comparing sets or numerals; and modeling simple joining and separating situations with sets of objects, or eventually with equations such as 5 + 2 = 7 and 7 – 2 = 5. (Kindergarten students should see addition and subtraction equations, and student writing of equations in Kindergarten is encouraged, but it is not required.) Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.

(2) Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic two-dimensional shapes, such as squares, triangles, circles, rectangles, and hexagons, presented in a variety of ways (e.g., with different sizes and orientations), as well as three-dimensional shapes such as cubes, cones, cylinders, and spheres. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

GUAM District Level Curriculum Map

Grade Kindergarten – MATH

Quarter 1

Big Idea 1, Quarter 1: Students will learn the meaning of numbers and the processes for counting, classifying, matching quantities, and writing numbers.	**Essential Question(s):** How do you write the numbers 1–10? Why is it important to know, count, and write numbers?

Standards:

K.CC.1	***Count to 100 by ones and by tens. (1-50)***
K.CC.3	***Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). (0-10)***
K.CC.4a	***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.(1-50)***
K.MD.3	*Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.*

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	2**. Reason abstractly and quantitatively.**	3. Construct viable arguments and critique the reasoning of others.	**4. Model with mathematics.**	**5. Use appropriate tools strategically.**	6. Attend to precision.	**7. Look for and make use of structure.**	8. Look for and express regularity in repeated reasoning.

Suggested Timeline: 3 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
Underlined information: the portion of the standard that is intended to be taught in a big idea.
BOLD information: Standards that should be emphasized

Big Idea 2, Quarter 1: Students will compose and describe basic shapes and show their relative positions.	**Essential Question(s):** How do you build new shapes from circles, squares, and other shapes? What are the different ways to describe the positions of shapes?

Standards:

K.G.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.***

K.G.2 ***Correctly name shapes regardless of their orientations or overall size. (Basic Shapes)***

K.G.5 ***Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	2. Reason abstractly and quantitatively.	3. Construct viable arguments and critique the reasoning of others.	**4. Model with mathematics.**	**5. Use appropriate tools strategically.**	6. Attend to precision.	7. Look for and make use of structure.	**8. Look for and express regularity in repeated reasoning.**

Suggested Timeline: 2 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
Underlined information: the portion of the standard that is intended to be taught in a big idea.
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Big Idea 1, Quarter 2: Students will count, represent quantities, and sort numbers and objects in various arrangements. (line and rectangle)	**Essential Question(s):** Why is it important to count to 100 by ones and tens? What is the relationship between counting and showing "how many"? How is counting to tell "how many" in a line and in a rectangle the same or different?

Standards:

K.CC.1	***Count to 100 by ones and by tens.***
K.CC.2	***Count forward beginning from a given number within the known sequence (instead of having to begin at 1).***
K.CC.3	***Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).***
K.CC.4a	***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.***
K.CC.4b	***Understand the relationship between numbers and quantities; connect counting to cardinality. 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.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.***
K.MD.3	***Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively.**	3. Construct viable arguments and critique the reasoning of others.	**4. Model with mathematics.**	5. Use appropriate tools strategically.	**6. Attend to precision.**	7. Look for and make use of structure.	8. Look for and express regularity in repeated reasoning.

Suggested Timeline: 2 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
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Big Idea 2, Quarter 2: Students will add using objects, fingers, drawings, sounds, and acting out.	**Essential Question(s):** How do we add? Why do we add?

Standards:

K.OA.1 ***Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively.**	3. Construct viable arguments and critique the reasoning of others.	**4. Model with mathematics.**	5. Use appropriate tools strategically.	6. Attend to precision.	7. Look for and make use of structure.	8. Look for and express regularity in repeated reasoning.

Suggested Timeline: 3 weeks

Big Idea 3, Quarter 2: Students will compose and describe solid figures and be able to describe its relative position.	**Essential Question(s):** How do we build two-dimensional and three-dimensional shapes using shapes? What are the different ways to describe the position of a shape within objects in the environment?

Standards:

K.G.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.***

K.G.2 ***Correctly name shapes regardless of their orientations or overall size.***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	2. Reason abstractly and quantitatively.	3. Construct viable arguments and critique the reasoning of others.	4. Model with mathematics.	5. Use appropriate tools strategically.	6. Attend to precision.	**7. Look for and make use of structure.**	**8. Look for and express regularity in repeated reasoning.**

Italic Information: Recursive standard – repeated in at least one other quarter;

Underlined information: the portion of the standard that is intended to be taught in a big idea.

BOLD information: Standards that should be emphasized

Big Idea 4, Quarter 2: Students will identify and analyze the criteria that must exist for two-dimensional and three-dimensional solid figures by using informal language.	**Essential Question(s):** How can we use informal language to identify and describe two-dimensional and three-dimensional shapes?

Standards:

K.G.3 *Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").*

K.G.4 *Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).*

K.G.5 ***Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.***

K.G.6 ***Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	2. Reason abstractly and quantitatively.	3. Construct viable arguments and critique the reasoning of others.	**4. Model with mathematics.**	**5. Use appropriate tools strategically.**	**6. Attend to precision.**	7. Look for and make use of structure.	**8. Look for and express regularity in repeated reasoning.**

Suggested Timeline: 2 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
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Big Idea 1, Quarter 3: Students will be able to identify how many objects are in a set and if one set has greater than, less than, or the same amount as another set. They will be able to compare using two numbers written as numerals.	**Essential Question(s):** How would you show if one group of objects is greater than, equal to, or less than another group? How do we determine how many objects are in a set regardless of how it is arranged? How does the arrangement help determine how many objects are in a set?

Standards:

K.CC.4C *Understand the relationship between numbers and quantities; connect counting to cardinality. c. Understand that each successive number name refers to a quantity that is one larger.*

K.CC.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.***

K.CC.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.*

K.CC.7 ***Compare two numbers between 1 and 10 presented as written numerals.***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively.**	3. Construct viable arguments and critique the reasoning of others.	**4. Model with mathematics.**	5. Use appropriate tools strategically.	**6. Attend to precision.**	**7. Look for and make use of structure.**	8. Look for and express regularity in repeated reasoning.

Italic Information: Recursive standard – repeated in at least one other quarter;
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Big Idea 2, Quarter 3: Students will compare the criteria that must exist for two-dimensional and three-dimensional solid figures by using informal language.	**Essential Question(s):** What is the same and what is different about two-dimensional shapes and three-dimensional shapes? What is the relationship between two-dimensional and three-dimensional solid figures?

Standards:

K.G.4 ***Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively.**	3. Construct viable arguments and critique the reasoning of others.	**4. Model with mathematics.**	**5. Use appropriate tools strategically.**	6. Attend to precision.	7. Look for and make use of structure.	8. Look for and express regularity in repeated reasoning.

Suggested Timeline: 2 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
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Big Idea 3, Quarter 3: Students will add numerals fluently and solve word problems using various strategies.	**Essential Question(s):** What are different ways to add numbers? How can addition word problems be solved? What are number combinations that make ten?

Standards:

K.OA.1 *Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.*

K.OA.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.OA.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.**

K.OA.5 ***Fluently add and subtract within 5.***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively.**	3. Construct viable arguments and critique the reasoning of others.	**4. Model with mathematics.**	**5. Use appropriate tools strategically.**	6. Attend to precision.	7. Look for and make use of structure.	8. Look for and express regularity in repeated reasoning.

Suggested Timeline: 3 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
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Big Idea 4, Quarter 3: Students will learn how to use numbers to describe a measureable attribute of an object, such as length or weight.	**Essential Question(s):** What are the different attributes of objects that can be measured? Why would you want to use numbers to describe an attribute?

Standards:

K.MD.1 **Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.**

K.MD.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.

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively.**	**3. Construct viable arguments and critique the reasoning of others.**	4. Model with mathematics.	5. Use appropriate tools strategically.	6. Attend to precision.	7. Look for and make use of structure.	8. Look for and express regularity in repeated reasoning.

Suggested Timeline: 1 week

Italic Information: Recursive standard – repeated in at least one other quarter;

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Big Idea 5, Quarter 3: Students will compose numbers 11–19 using objects or drawings and use drawings, numbers, and equations to record each composition.	**Essential Question(s):** What are different ways to show the composition of numbers 11–19?

Standards:

K.NBT.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.***

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively.**	**3. Construct viable arguments and critique the reasoning of others.**	**4. Model with mathematics.**	5. Use appropriate tools strategically.	6. Attend to precision.	7. Look for and make use of structure.	8. Look for and express regularity in repeated reasoning.

Suggested Timeline: 2 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
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BOLD information: Standards that should be emphasized

Big Idea 1, Quarter 4: Students will know and describe basic shapes and two-dimensional and three-dimensional solid figures.	**Essential Question(s):** What are the basic shapes and solid figures? How could you describe the basic shapes and solid figures?

Standards:

K.G.4 **Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).**

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively**	3. Construct viable arguments and critique the reasoning of others	**4. Model with mathematics**	**5. Use appropriate tools strategically.**	6. Attend to precision	7. Look for and make use of structure	8. Look for and express regularity in repeated reasoning

Suggested Timeline: 3 weeks

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Big Idea 2, Quarter 4: Students will fluently subtract within 5 and compose and decompose numbers 1–10 using various strategies.	**Essential Question(s):** How is subtraction different from addition? What are the ways you think about subtraction facts? How do you remember each subtraction fact?

Standards:

K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

K.OA.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.OA.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.OA.5 **Fluently add and subtract within 5.**

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively**	3. Construct viable arguments and critique the reasoning of others	**4. Model with mathematics**	**5. Use appropriate tools strategically.**	6. Attend to precision	7. Look for and make use of structure	8. Look for and express regularity in repeated reasoning

Suggested Timeline: 3 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
Underlined information: the portion of the standard that is intended to be taught in a big idea.
BOLD information: Standards that should be emphasized

Big Idea 3, Quarter 4: Students will decompose numbers 11–19 using various strategies and record each decomposition using drawings and equations.	**Essential Question(s):** How do you show how a number decomposes? Why would you want to decompose a number?

Standards:

K.NBT.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**.

Mathematical Practices:

1. Make sense of problems and persevere in solving them.	**2. Reason abstractly and quantitatively**	**3. Construct viable arguments and critique the reasoning of others**	**4. Model with mathematics**	5. Use appropriate tools strategically.	6. Attend to precision	7. Look for and make use of structure	8. Look for and express regularity in repeated reasoning

Suggested Timeline: 3 weeks

Italic Information: Recursive standard – repeated in at least one other quarter;
Underlined information: the portion of the standard that is intended to be taught in a big idea.
BOLD information: Standards that should be emphasized