A Side-by-Side Comparison of the Kindergarten Standards
in the
2019 Alabama Course of Study: Mathematics and the Common Core State Standards for Mathematics

	2019 Alabama Course of Study: Mathematics		Common Core State Standards for Mathematics
1	Count forward orally from 0 to 100 by ones and by tens. Count backward orally from 10 to 0 by ones.	K.CC.1	Count to 100 by ones and by tens.
2	Count to 100 by ones beginning with any given number between 0 and 99.	K.CC.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
3	Write numerals from 0 to 20. a. Represent 0 to 20 using concrete objects when given a written numeral from 0 to 20 (with 0 representing a count of no objects).	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).
4	4. Connect counting to cardinality using a variety of concrete objects. a. Say the number names in consecutive order when counting objects. b. Indicate that the last number name said tells the number of objects counted in a set. c. Indicate that the number of objects in a set is the same regardless of their arrangement or the order in which they were counted. d. Explain at each successive number name refers to a quantity that is one larger.	K.CC.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.
5	Count to answer "how many?" questions. a. Count using no more than 20 concrete objects arranged in a line, a rectangular array, or a circle. b. Count using no more than 10 concrete objects in a scattered configuration. c. Draw the number of objects that matches a given numeral from 0 to 20.	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.
6	Orally identify whether the number of objects in one group is greater/more than, less/fewer than, or equal/the same as the number of objects in another group, in groups containing up to 10 objects, by using matching, counting, and other strategies.	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.
7	Compare two numbers between 0 and 10 presented as written numerals (without using inequality symbols).	K.CC.7	Compare two numbers between 1 and 10 presented as written numerals.
8	Represent addition and subtraction up to 10 with concrete objects, fingers, pennies, mental images, drawings, claps or other sounds, acting out situations, verbal explanations, expressions, or equations.	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.

9	Solve addition and subtraction word problems, and add and subtract within 10, by using concrete objects or drawings to represent the problem.	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.
10	Decompose numbers less than or equal to 10 into pairs of smaller numbers in more than one way, by using concrete objects or drawings, and record each decomposition by a drawing or equation. Example: 5 = 2 + 3 and 5 = 4 + 1	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).
11	For any number from 0 to 10, find the number that makes 10 when added to the given number, by using concrete objects or drawings, and record the answer with a drawing or equation.	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.
12	Fluently add and subtract within 5.	K.OA .5	Fluently add and subtract within 5.
13	Duplicate and extend simple patterns using concrete objects.		
14	Compose and decompose numbers from 11 to 19 by using concrete objects or drawings to demonstrate understanding that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	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.
15	Classify objects into given categories of 10 or fewer; count the number of objects in each category and sort the categories by count.	K.MD.3	Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.
16	Identify and describe measurable attributes (length, weight, height) of a single object using vocabulary such as long/short, heavy/light, or tall/short.	K.MD.1	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
17	Directly compare two objects with a measurable attribute in common to see which object has "more of " or "less of" the attribute and describe the difference. Example: Directly compare the heights of two children and describe one child as "taller " or "shorter. "	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.*
18	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, be/ow, beside, in front of, behind, and next to.	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.*
19	Correctly name shapes regardless of their orientations or overall sizes.	K.G.2	Correctly name shapes regardless of their orientations or overall size.
20	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid').	K.G.3	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").
21	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (number of sides and vertices or "comers"), and other attributes. Example: having sides of equal length	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).
22	Model shapes in the world by building them from sticks, clay balls, or other components and by drawing them.	K.G.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
23	Use simple shapes to compose larger shapes. Example: Join two triangles with full sides touching to make a rectangle.	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?"*

A Side-by-Side Comparison of the First Grade Standards
in the
2019 Alabama Course of Study: Mathematics and the Common Core State Standards for Mathematics

	2019 Alabama Course of Study: Mathematics		Common Core State Standards for Mathematics
1	Use addition and subtraction to solve word problems within 20 by using concrete objects, drawings, and equations with a symbol for the unknown number to represent the problem. a. Add to with change unknown to solve word problems within 20. b. Take from with change unknown to solve word problems within 20. c. Put together/take apart with addend unknown to solve word problems within 20. d. Compare quantities, with difference unknown, bigger unknown, and smaller unknown while solving word problems within 20.	1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 by using concrete objects, drawings, or equations with a symbol for the unknown number to represent the problem.	1.OA.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
3	Apply properties of operations as strategies to add and subtract. Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known (commutative property of addition). To add $2 + 6 + 4$, the second and third numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$ (associative property of addition). When adding 0 to a number, the result is the same number (identity property of zero for addition).	1.OA.3	Apply properties of operations as strategies to add and subtract. *Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)*
4	Explain subtraction as an unknown-addend problem. Example: subtracting $10 - 8$ by finding the number that makes 10 when added to 8	1.OA.4	Understand subtraction as an unknown-addend problem. *For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.*
5	Relate counting to addition and subtraction Example: counting on 2 to add 2	1.OA.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
6	Add and subtract within 20. a. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by counting on. b. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by making ten. c. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by decomposing a number leading to a ten. Example: $13 – 4 = 13 – 3 – 1 = 10 – 1 = 9$ d. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by using the relationship between addition and subtraction. Example: Knowing that $8 + 4 = 12$, one knows $12 – 8 = 4$	1.OA.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 – 4 = 13 – 3 – 1 = 10 – 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 – 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

	e. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by creating equivalent but easier or known sums. Example: adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13		
7	Explain that the equal sign means "the same as." Determine whether equations involving addition and subtraction are true or false. Example: determining which of the following equations are true and which are false: 6 = 6, 7 = 8 − 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2	1.OA.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 − 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*
8	Solve for the unknown whole number in various positions in an addition or subtraction equation, relating three whole numbers that would make it true. Example: determining the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = ? − 3, 6 + 6 = ?.	1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = ◆ − 3, 6 + 6 = ◆.*
9	Reproduce, extend, and create patterns and sequences of numbers using a variety of materials.		
10	Extend the number sequence from 0 to 120. a. Count forward and backward by ones, starting at any number less than 120. b. Read numerals from 0 to 120. c. Write numerals from 0 to 120. d. Represent a number of objects from 0 to 120 with a written numeral.	1.NBT.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
11	Explain that the two digits of a two-digit number represent amounts of tens and ones. a. Identify a bundle of ten ones as a "ten." b. Identify the numbers from 11 to 19 as composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. c. Identify the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 as one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	1.NBT.2	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a "ten." b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
12	Compare pairs of two-digit numbers based on the values of the tens and ones digits, recording the results of comparisons with the symbols >, =, and < and orally with the words "is greater than," "is equal to," and "is less than."	1.NBT.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
13	Add within 100, using concrete models or drawings and strategies based on place value. a. Add a two-digit number and a one-digit number. b. Add a two-digit number and a multiple of 10. c. Demonstrate that in adding two-digit numbers, tens are added to tens, ones are added to ones, and sometimes it is necessary to compose a ten.	1.NBT.4	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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 and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

	d. Relate the strategy for adding a two-digit number and a one-digit number to a written method and explain the reasoning used.		
14	Given a two-digit number, mentally find 10 more or 10 less than the number without having to count, and explain the reasoning used.	1.NBT.5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
15	Subtract multiples of 10 from multiples of 10 in the range 10-90 (positive or zero differences), 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 and explain the reasoning used.	1.NBT.6	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), 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 and explain the reasoning used.
16	Organize, represent, and interpret data with up to three categories. a. Ask and answer questions about the total number of data points in organized data. b. Determine "how many" in each category using up to three categories of data. c. Determine "how many more" or "how many less" are in one category than in another using data organized	1.MD.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
17	Order three objects by length; compare the lengths of two objects indirectly by using a third object.	1.MD.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.
18	Determine the length of an object using non-standard units with no gaps or overlaps, expressing the length of the object with a whole number.	1.MD.2	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*
19	Tell and write time to the hours and half hours using analog and digital clocks.	1.MD.3	Tell and write time in hours and half-hours using analog and digital clocks.
20	Identify pennies and dimes by name and value.		
21	Build and draw shapes which have defining attributes. a. Distinguish between defining attributes and non-defining attributes. Examples: Triangles are closed and three- sided, which are defining attributes; color, orientation, and overall size are non-defining attributes.	1.G.1	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
22	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	1.G.2	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.
23	Partition circles and rectangles into two and four equal shares and describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of.	1.G.3	Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these

| a. Describe "the whole" as two of or four of the shares of circles and rectangles partitioned into two or four equal shares.
b. Explain that decomposing into more equal shares creates smaller shares of circles and rectangles. | | examples that decomposing into more equal shares creates smaller shares. |