Arkansas Mathematics Standards
Grade K
2016

Kindergarten – Arkansas Mathematics

Counting and Cardinality	**Know number names and the count sequence**
AR.Math.Content.K.CC.A.1	Count to 100 by ones, fives, and tens
AR.Math.Content.K.CC.A.2	Count forward, by ones, from any given number up to 100
AR.Math.Content.K.CC.A.3	Read, write, and represent numerals from 0 to 20 Note: K.CC.A.3 addresses the writing of numbers and using the written numerals 0-20 to describe the amount of a set of objects. Due to varied progression of fine motor and visual development, a reversal of numerals is anticipated for the majority of students. While reversals should be pointed out to students, the emphasis is on the use of numerals to represent quantities rather than the correct handwriting of the actual number itself.

Counting and Cardinality	**Count to tell the number of objects**
AR.Math.Content.K.CC.B.4	Understand the relationship between numbers and quantities; connect counting to cardinality When counting objects: • Say the numbers in order, pairing each object with only one number and each number with only one object (one to one correspondence) • Understand that the last number said tells the number of objects counted • Understand that each successive number refers to a quantity that is one larger Note: Students should understand that the number of objects is the same regardless of their arrangement or the order in which they were counted.
AR.Math.Content.K.CC.B.5	Count to answer “how many?”: • Count up to 20 objects in any arrangement • Count up to 10 objects in a scattered configuration • Given a number from 1-20, count out that many objects Note: As students progress they may first move the objects, counting as they move them. Students may also line up objects to count them. If students have a scattered arrangement, they may touch each item as they count it, or if students have a scattered arrangement, they may finally be able to count them by visually scanning without touching the items.

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Counting and Cardinality	**Compare numbers**
AR.Math.Content.K.CC.C.6	Identify whether the number of objects in one group from 0-10 is greater than (more, most), less than (less, fewer, least), or equal to (same as) the number of objects in another group of 0-10 For example: Use matching and counting strategies to compare *values*.
AR.Math.Content.K.CC.C.7	Compare two numbers between 0 and 20 presented as written numerals Note: The use of the symbols for greater than/less than should not be introduced in this grade level. Appropriate terminology to use would be more than, less than, or the same as.
AR.Math.Content.K.CC.C.8	Quickly identify a number of items in a set from 0-10 without counting (e.g., dominoes, dot cubes, tally marks, ten-frames)

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Operations and Algebraic Thinking	**Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from**
AR.Math.Content.K.OA.A.1	Represent addition and subtraction using objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, *expressions* (e.g., 2+3), or *equations* (e.g., 2+3 =) Note: *Expressions* and *equations* are not required but are recommended by the end of Kindergarten.
AR.Math.Content.K.OA.A.2	Solve real-world problems that involve addition and subtraction within 10 (e.g., by using objects or drawings to represent the problem)
AR.Math.Content.K.OA.A.3	Use objects or drawings to decompose (break apart) numbers less than or equal to 10 into pairs in more than one way, and record each decomposition (part) by a drawing or an equation (e.g., 5 = 2 + 3 and 5 = 4 + 1) Note: Students should see *equations* and be encouraged to recognize that the two parts make the whole. However, writing *equations* is not required.
AR.Math.Content.K.OA.A.4	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 Note: Use of different manipulatives such as ten-frames, cubes, or two-color counters, assists students in visualizing these number pairs.
AR.Math.Content.K.OA.A.5	Fluently add and subtract within 10 by using various strategies and manipulatives Note: Fluency in this standard means accuracy (correct answer), efficiency (a reasonable amount of steps), and flexibility (using various strategies). Fluency is developed by working with many different kinds of objects over an extended period of time. This objective does not require the students to instantly know the answer.

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Number and Operations in Base Ten	**Work with numbers 11-19 to gain foundations for place value**
AR.Math.Content.K.NBT.A.1	Develop initial understanding of *place value* and the base-ten number system by showing equivalent forms *of whole numbers* from 11 to 19 as groups of tens and ones using objects and drawings

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Measurement and Data	**Describe and compare measurable attributes**
AR.Math.Content.K.MD.A.1	Describe several measurable *attributes* of a single object, including but not limited to length, weight, height, and temperature Note: Vocabulary may include short, long, heavy, light, tall, hot, cold, warm, or cool.
AR.Math.Content.K.MD.A.2	Describe the difference when comparing two objects (side-by-side) with a measurable *attribute* in common, to see which object has more of or less of the common *attribute* Note: Vocabulary may include shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more.

Measurement and Data	**Classify objects and count the number of objects in each category**
AR.Math.Content.K.MD.B.3	Classify, sort, and count objects using both measurable and non-measurable *attributes* such as size, number, color, or shape Note: Limit category count to be less than or equal to 10. Students should be able to give the reason for the way the objects were sorted.

Measurement and Data	**Work with time and money**
AR.Math.Content.K.MD.C.4	• Understand concepts of time including morning, afternoon, evening, today, yesterday, tomorrow, day, week, month, and year • Understand that clocks, both analog and digital, and calendars are tools that measure time
AR.Math.Content.K.MD.C.5	Read time to the hour on digital and analog clocks Note: This is an introductory skill and is addressed more formally in the upcoming grade levels.
AR.Math.Content.K.MD.C.6	Identify pennies, nickels, and dimes, and know the *value* of each Note: This is an introduction skill and is addressed more formally in the upcoming grade levels.

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Geometry	**Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)**
AR.Math.Content.K.G.A.1	Describe the positions of objects in the environment and geometric shapes in space using names of shapes, and describe the relative positions of these objects Note: Positions could be inside, outside, between, above, below, near, far, under, over, up, down, behind, in front of, next to, to the left of, to the right of, or beside.
AR.Math.Content.K.G.A.2	Correctly name shapes regardless of their orientations or overall size Note: Orientation refers to the way the shape is turned (upside down, sideways).
AR.Math.Content.K.G.A.3	Identify shapes as two-dimensional (flat) or three-dimensional (solid)

Geometry	**Analyze, compare, create, and compose shapes**
AR.Math.Content.K.G.B.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) Note: 2-D shapes: squares, circles, triangles, rectangles, and hexagons 3-D shapes: cube, cone, cylinder, and sphere
AR.Math.Content.K.G.B.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and by drawing shapes
AR.Math.Content.K.G.B.6	Compose two-dimensional shapes to form larger two-dimensional shapes For example: Join two squares to make a rectangle or join six equilateral triangles to form a hexagon.