North Carolina Mathematics

Grade K

Adopted 2018

Standards for Mathematical Practice

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

Counting and Cardinality

Know number names and the counting sequence.

1. Know number names and recognize patterns in the counting sequence by:
Counting to 100 by ones.
Counting to 100 by tens. NC.K.CC.1
2. Count forward beginning from a given number within the known sequence, instead of having to begin at 1. NC.K.CC.2
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. NC.K.CC.3

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Count to tell the number of objects.

4. Understand the relationship between numbers and quantities.
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 (one-to-one correspondence).
Recognize that the last number named tells the number of objects counted regardless of their arrangement (cardinality). State the number of objects in a group, of up to 5 objects, without counting the objects (perceptual subitizing). NC.K.CC.4
5. Count to answer "How many?" in the following situations:
Given a number from 1–20, count out that many objects.
Given up to 20 objects, name the next successive number when an object is added, recognizing the quantity is one more/greater.
Given 20 objects arranged in a line, a rectangular array, and a circle, identify how many.
Given 10 objects in a scattered arrangement, identify how many. NC.K.CC.5

Compare numbers.

6. Identify whether the number of objects, within 10, in one group is greater than, less than, or equal to the number of objects in another group, by using matching and counting strategies. NC.K.CC.6
7. Compare two numbers, within 10, presented as written numerals. NC.K.CC.7

Operations and Algebraic Thinking

Understand addition and subtraction.

1. Represent addition and subtraction, within 10:
Use a variety of representations such as objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, or expressions.
Demonstrate understanding of addition and subtraction by making connections among representations. NC.K.OA.1
2. Solve addition and subtraction word problems, within 10, using objects or drawings to represent the problem, when solving:
Add to/Take From-Result Unknown
Put Together/Take Apart (Total Unknown and Two Addends Unknown) NC.K.OA.2
3. Decompose numbers less than or equal to 10 into pairs in more than one way using objects or drawings, and record each decomposition by a drawing or expression. NC.K.OA.3
4. For any number from 0 to 10, find the number that makes 10 when added to the given number using objects or drawings, and record the answer with a drawing or expression. NC.K.OA.4
6. Recognize and combine groups with totals up to 5 (conceptual subitizing). NC.K.OA.6
5. Demonstrate fluency with addition and subtraction within 5. NC.K.OA.5

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uild foundation for place value.

1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones by:
Using objects or drawings.
Recording each composition or decomposition by a drawing or expression.
Understanding that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. NC.K.NBT.1

Measurement and Data

Describe and compare measurable attributes.

1. Describe measurable attributes of objects; and describe several different measurable attributes of a single object. NC.K.MD.1
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. NC.K.MD.2

Classify objects and count the number of objects in each category.

3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. NC.K.MD.3

Geometry

Identify and describe shapes.

1. Describe objects in the environment using names of shapes, and describe the relative positions of objects using positional terms. NC.K.G.1
2. Correctly name squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres regardless of their orientations or overall size. NC.K.G.2
3. Identify squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres as two-dimensional or three-dimensional. NC.K.G.3

Analyze, compare, create, and compose shapes.

4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, attributes and other properties. NC.K.G.4
5. Model shapes in the world by:
Building and drawing triangles, rectangles, squares, hexagons, circles.
Building cubes, cones, spheres, and cylinders. NC.K.G.5
6. Compose larger shapes from simple shapes. NC.K.G.6