Oregon Early Learning Kindergarten Guidelines

Mathematics: By End of Kindergarten

COUNTING AND CARDINALITY

1 Child knows number names and the count sequence. 1

- a Counts to 100 by ones and by 10's. 1.A
- b Counts forward beginning from a given number within the known sequence (instead of having to begin at one). 1.B

2 Child recognizes the number of objects in a small set. 2

- a No matching CCSS standard. 2.A

3 Child understands the relationship between numbers and quantities. 3

- a Understands the relationship between numbers and quantities; connect counting to cardinality. 3.A
  1. When counting objects, says 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. 3.A.1
  2. Understands 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. 3.A.2
  3. Understands that each successive number name refers to a quantity that is one larger. 3.A.3
- b Counts 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, counts out that many objects. 3.B

4 Child compares numbers. 4

- a Identifies 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, including groups with up to 10 objects). 4.A
- b Compares two numbers between 1 and 10 presented as written numerals. 4.B

5 Child associates a quantity with written numerals and begins to write numbers. 5

- a Writes numbers from 0–20. 5.A
- b Represents a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). 5.B

OPERATIONS AND ALGEBRAIC THINKING

6 Child understands addition as adding to and understands subtraction as taking away from. 6

- a Represents addition and subtraction with objects, fingers, mental images, or 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 problem. This applies wherever drawings are mentioned in the standards.) 6.A
- b Solves addition and subtraction word problems and adds and subtracts within 10, (e.g., by using objects or drawings to represent the problem). 6.B
- c Decomposes numbers less than or equal to 10 into pairs in more than one way (e.g., by using objects or drawings) and records each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). 6.C
- d For any number from 1 to 9, finds the number that makes 10 when added to the given number (e.g., by using objects or drawings) and records the answer with a drawing or equation. 6.D
- e Fluently adds and subtracts within five. 6.E

7 Child understands simple patterns. 7

- a Not addressed in CCSS. 7.A

NUMBERS AND OPERATIONS IN BASE TEN

8 Child works with numbers 11 to 19 to gain foundations for place value. 8

- a Composes and decomposes numbers from 11 to 19 into 10 ones and some further ones (e.g., by using objects or drawings) and records each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understands that these numbers are composed of 10 ones and one, two, three, four, five, six, seven, eight, or nine ones. 8.A

MEASUREMENT AND DATA

9 Child measures objects by their various attributes using standard and non-standard measurement and uses differences in attributes to make comparisons. 9

- a Describes measurable attributes of objects, such as length or weight. Describes several measurable attributes of a single object. 9.A
- b Directly compares two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describes the difference. For example, directly compares the heights of two children and describes one child as taller/shorter. 9.B

10 Child classifies objects into given categories; counts the numbers of objects in each category and sorts the categories by count. (Limit category counts to be less than or equal to 10). 10

- a Classifies objects into given categories; counts the numbers of objects in each category and sorts the categories by count. (Limit category counts to be less than or equal to 10.) 10.A

GEOMETRY AND SPATIAL SENSE

11 Child identifies, describes, compares, and composes shapes. 11

- a Correctly names shapes regardless of their orientations or overall size. 11.A
- b. Identifies shapes as two-dimensional (lying in a plane, “flat”) or threedimensional (“solid”). 11.B
- c Analyzes and compares 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). 11.C
- d Models shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. 11.D
- e Composes simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?” 11.E

12 Child explores the positions of objects in space. 12

- a Describes objects in the environment using names of shapes and describes the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. 12.A