

Diocese of Phoenix Math Standards
Kindergarten

Counting and Cardinality Know number names and the count sequence	
2021	Standard
K.CC.1	Count to 100 by ones and by tens. DG1-S1-C1-PO2 Identify a whole number represented by a model with a word name and symbol 0 to 100.
K.CC.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1). DGK-S1-C1-DPO3 Count from any number, forward or backwards, 1-31. DG1-S1-C1-DPO3 Count aloud forward or backward in consecutive order (0 through 100).
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). DGK-S1-C1-PO4 Identify and write whole numbers through 20 in or out of order. DGK-S1-C1-PO5 Recognize the ordinal numbers through the 10th place. DGK-S1-C1-DPO Count objects to 100. DGK-S1-C1-PO7-09 Compare two whole numbers through 20. □ Order three or more whole numbers through 20 (least to greatest or greatest to least).
K.CC.4	Understand the relationship between numbers and quantities; connect counting to cardinality. DGK-S1-C1-DPO2 Identify orally a whole number represented by a model with a word name and symbol 0-31. DGK-S1-C1-DPO4 Understand concepts: few, many, more, less, equal, zero. DGK-S1-C1-DPO5 Recognize the ordinal numbers through the 10th place.

Diocese of Phoenix Math Standards Kindergarten

	DGK-S1-C1-DPO6 Count objects to 100. DGK-S1-C1-PO7 Compare two whole numbers through 20. DGK-S1-C1-PO9 Order three or more whole numbers through 20 (least to greatest or greatest to least). ☐ 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. ☐ 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. ☐ 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. Given a number from 1–20, count out that many objects. ☐ Arranged in a line ☐ Arranged in a rectangular array ☐ Arranged in a circle ☐ As many as 10 things arranged in a scattered configuration DGK-S1-C1-DPO1 Make a model to represent a given whole number 0-31. DGK-S1-C2-DPO2 Count by 2’s, 5’s and 10’s.
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. (Include groups with up to ten objects). DGK-S1-C1-PO4 Understand concepts: few, many, more, less, equal, zero. DGK-S1-C1-PO6 Construct equivalent forms of whole numbers, using manipulatives, through 10. Compare two whole numbers through 20. DGK-S1-C1-PO9 Order three or more whole numbers through 20 (least to greatest or greatest to least).
K.CC.7	Compare two numbers between 1 and 10 presented as written numerals.

Diocese of Phoenix Math Standards Kindergarten

DGK-S1-C1-PO5 Write whole numbers through 20 in or out of order.

DGK-S1-C1-PO7 Compare two whole numbers through 20.

	Operations and Algebraic Thinking Understanding addition as putting together and adding to, and understand subtraction as taking apart and taking from
K.OA.1	Represent addition and subtraction with: ☐ Objects ☐ Fingers ☐ Mental images ☐ Drawings (Drawings need not show details, but should show the mathematics in the problems. This applies wherever drawings are mentioned in the standards) ☐ Sounds (e.g., claps) ☐ Acting out situations ☐ Verbal explanations ☐ Expressions ☐ Equations DGK-S1-C2-PO1 Model addition through sums of 10 using manipulatives. DGK-S3-C1-DPO1 Create, describe and extend a variety of patterns, using concrete objects.
K.OA.2	Solve addition and subtraction word problems, and add and subtract within 10, by using objects or drawings to represent the problem. ☐ Model addition through sums of 10 using manipulatives. ☐ Select the operation to solve word problems using numbers 0 through 9. ☐ Solve word problems presented orally using addition or subtraction with numbers through 9. DGK-S1-C2-PO5 Identify the symbols: +, -, =, .

Diocese of Phoenix Math Standards Kindergarten

	DGK-S1-C2-PO6 Use grade-level appropriate mathematical terminology. DGK-S1-C2-DPO1 Understand concepts: minus, plus.
K.0A.3	Decompose numbers less than or equal to 10 into pairs in more than one way. □ By using objects or drawings. □ Record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$). DG1-S1-C2-PO3 State addition facts for sums through 18 and subtraction for differences with minuends through 9 or less. DG1-S1-C2-PO9 Demonstrate families of equations for addition and subtraction through 18.
K.0A.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. DG1-S1-C2-PO3 State addition facts for sums through 18 and subtraction for differences with minuends through 9 or less. DG1-S1-C2-PO9 Demonstrate families of equations for addition and subtraction through 18. DG1-S1-C2-DPO1 Write equations.
K.0A.5	Fluently add and subtract within 5. DG1-S1-C2-PO1 Demonstrate the process of addition through sums of 20 using manipulatives. DG1-S1-C2-PO2 Demonstrate the process of subtraction with minuends of 20 using manipulatives.

Diocese of Phoenix Math Standards
Kindergarten

Numbers and Operations in Base Ten Work with numbers 11-19 to gain foundations for place value.	
K.NBT.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones. ☐ by using objects or drawings ☐ 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 DG1-S1-C1- PO6 Construct equivalent forms of whole numbers using manipulatives or symbols through 99.

Measurement and Data Describe and compare measurable attributes	
K.MD.1	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. DGK-S4-C4-DPO1 Recognize that a single object has different attributes (e.g., length, color, size, texture) that can be measured in different ways. DGK-S4-C4-DPO2 Verbally and physically compare objects according to observable and measurable attributes. ☐ Compare capacity, sizes, temperatures, and weights.
K.MD.2	Directly compare two objects with a measurable attribute in common, ☐ To see which object has “more of”/“less of” the attribute ☐ Describe the difference DGK-S4-C4-PO3 Order objects according to observable and measurable attributes.

Diocese of Phoenix Math Standards Kindergarten

K.MD.3	Classify objects into given categories. ☐ Count the numbers of objects in each category ☐ Sort the categories by count (Limit category counts to be less than or equal to 10) DGK-S1-C1-DPO6 Count objects to 100.
--------	--

Geometry Identify and decide shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)	
K.G.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such ☐ Above ☐ Below ☐ Beside ☐ In front of ☐ Behind ☐ Next to DGK-S4-C1-PO2 Identify concepts and terms of position and size in contextual situations ☐ Inside/outside ☐ Above/below/between ☐ Smaller/larger ☐ Longer/shorter
K.G.2	Correctly name shapes regardless of their orientations or overall size. DGK-S4-C1-PO2 Identify concepts and terms of position and size in contextual situations ☐ Inside/outside ☐ Above/below/between ☐ Smaller/larger ☐ Longer/shorter

Diocese of Phoenix Math Standards Kindergarten

K.G.3	Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). DGK-S4-C1-PO2 Identify concepts and terms of position and size in contextual situations ☐ Inside/outside ☐ Above/below/between ☐ Smaller/larger ☐ Longer/shorter (2D only) DG3-S4-C1-PO2 Name concrete objects and pictures of 3-dimensional solids (cones, spheres, and cubes). (3D)
K.G.4	Analyze and compare two- and three-dimensional shapes ☐ 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) DGK-S4-C1-DPO1 Compare, classify, draw and make models of shapes.
K.G.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. DGK-S4-C1-DPO2 Recognize geometry in their surroundings ☐ Identify days, weeks, months on calendar ☐ Understand concepts: yesterday, today, tomorrow, last night, etc. ☐ Tell time to the hour
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?"

Diocese of Phoenix Math Standards
Kindergarten

Computation	
K.C.1	Model addition by joining sets of objects (for any two sets with fewer than 10 objects when joined).
K.C.2	Model subtraction by removing objects from sets (for numbers less than 10).
K.C.3	Describe addition and subtraction situations (for numbers less than 10).