Grade	Concepts	Conceptual Understandings	Skill, Attitude & Knowledge Outcomes	Standards Alignment US Common Core
K2	counting consecutive number pattern efficiency set order number-line counting-all counting-on symbolism representation largest number symbol 1 to 1 correspondence total whole set	**Domain: Counting and Cardinality** Central idea: Counting enables us to assign a number name to a set of objects **Students will understand that:** • Counting is ordinal **(A1)** • There are regular patterns in our number system which we can use to help us count more efficiently **(A1)** • The set of whole numbers has a specific order and can be shown by a unique point on the number line. **(A2)** • Counting on from the largest number in a set is more efficient than counting all **(A2)** • A unique symbol represents each number **(A3, C7)** • Numbers correspond to the number of objects counted **(B4a, C7)** • The number name of the last object counted describes the quantity of the whole set **(B4b, B5, C6)** • The number of objects is the same regardless of their arrangement or the order in which they were counted. (**B4b, B5, C6)** • Each successive number name refers to a quantity that is one larger. (**B5)**	**Students can:** • **A1:** Count to 100 by ones and by tens. • **A2:** Count forward beginning from a given number within the known sequence using objects and number lines • **A3:** 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). • **B4a:** 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. • **B4b:** Uses the last number of a set to describe the number of objects counted irrespective of their arrangement or the order in which they were counted. • **B5:** 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. • **C6:** 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. • **C7:** Compares two numbers between 1 and 10 presented as written numerals.	CCSS.MATH.CONTENT.K.CC.A.1 CCSS.MATH.CONTENT.K.CC.A.2 CCSS.MATH.CONTENT.K.CC.A.3 CCSS.MATH.CONTENT.K.CC.B.4 CCSS.MATH.CONTENT.K.CC.B.4.A CCSS.MATH.CONTENT.K.CC.B.4.B CCSS.MATH.CONTENT.K.CC.B.4.C CCSS.MATH.CONTENT.K.CC.B.5 CCSS.MATH.CONTENT.K.CC.C.6 CCSS.MATH.CONTENT.K.CC.C.7

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<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>addition
group
subtraction
quantity
comparison
more
less
set
representation
object
symbol
story
decomposition
part of whole
whole
equivalence</td><td colspan="2">Domain: Operations and Algebraic thinking
Central idea: Representing problems as number sentences helps us to interpret and solve them.</td><td>CCSS.MATH.CONTENT.K.OA.A.1
CCSS.MATH.CONTENT.K.OA.A.2
CCSS.MATH.CONTENT.K.OA.A.3
CCSS.MATH.CONTENT.K.OA.A.4
CCSS.MATH.CONTENT.K.OA.A.5</td></tr>
<tr><td></td><td></td><td>Students will understand that:
• We can represent addition and subtraction using objects, symbols, image and stories (A1, A2, A4)
• We can decompose larger numbers into sets of smaller numbers (A3)
• Addition is joining group to make a larger group (A5)
• Subtraction is taking a certain quantity away from a group (A5)
• Comparing two quantities to find how much more/less one is than the other, is one interpretation of subtraction (A2, A4 A5)</td><td>Students can:
• A1: Represent addition and subtraction with objects, fingers, mental images, drawings sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations (e.g., 5 = 2 + 3).
• A2: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
• A3: 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).
• A4: 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
• A5: Fluently add and subtract within 5.</td><td></td></tr>
<tr><td></td><td>decomposition
tens
units
representation
object
symbol
image</td><td colspan="2">Domain: Number and Operations in Base Ten
Central idea: Understanding place value helps develop good number sense</td><td>CCSS.MATH.CONTENT.K.NBT.A.1</td></tr>
<tr><td></td><td></td><td>Students will understand that:
• We can decompose numbers larger than 10 into tens and units (A1)
• We can represent addition and subtraction using objects, symbols & images (A1)</td><td>Students can:
• A1: 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 (such as 18 = 10 + 8)</td><td></td></tr>
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	length weight height capacity sort color shape attribute non-standard unit	**Domain: Measurement and Data** **Central idea: Objects have measurable attributes that can be compared and described**		CCSS.MATH.CONTENT.K.MD.A.1 CCSS.MATH.CONTENT.K.MD.A.2 CCSS.MATH.CONTENT.K.MD.B.3
		Students will understand that: • Objects can be measured and compared by their attributes (**A1, A2**,). • Attributes can be used to compare and sort a group of objects (**B3**). • Using non standard units is a way to measure and compare the attributes of an object **(B3**). • In order to be a true measure/comparison the non-standard unit used must be the same (**B3**). • Attributes such as color, shape, or size can be used to sort the same set of objects in different ways **B3**).	**Students can:** • **A1:** Describe several,l measurable attributes of a single object such as length or weight using non standard units. • **A2:** 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 • **B3:** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	
		Domain: Geometry **Central idea: Shapes can be classified and compared according to their properties.** •		
	shape categorization side corner/angle solid faces vertices/corner edge combination comparison position	**Students will understand that:** • The position of objects can be determined in relation to surrounding objects and described using position words **(A1)**. • Flat shapes can be described and categorized by their sides and corners (**A2**) • Solid shapes can be described and categorized by their faces, vertices/corners and edges **(A2, A3)** • Solid shapes have length, width, and height. (**B4**)	**Students can:** • **A1:** 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. • **A2:** Correctly name regular shapes regardless of their orientations or overall size. • **A3:** Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). • **A3a:** Identify and describe the following regular shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). • **B4:** Analyze and compare two- and three- dimensional	CCSS.MATH.CONTENT.K.G.A.1 CCSS.MATH.CONTENT.K.G.A.2 CCSS.MATH.CONTENT.K.G.A.3 CCSS.MATH.CONTENT.K.G.B.4 CCSS.MATH.CONTENT.K.G.B.5 CCSS.MATH.CONTENT.K.G.B.6

		• Some solid figures can be compared by their flat surfaces (faces) and vertices (corners) (**B4**). • Shapes can be combined in order to make other shapes (**B4, B5, B6**)	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). • **B5:** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. • **B6:** Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"	