

## Analysis of *California Mathematics* standards to *Common Core* standards- Kindergarten

| Strand              | CA Math Standard  | Domain                   | Common Core Standard (CCS)  | Alignment | Comments in reference to CCS   |
|---------------------|---|--------------------------|---|-----------|--|
| Strand Number Sense | CA Math Standard  |                          |   |           |  |
| 1.0 Number Sense    | 1.0 Students understand the relationship between numbers and quantities (i.e., that a set of objects has the same number of objects in different situations regardless of its position or arrangement). | Counting and Cardinality | K.CC: Know number names and the counting sequence.<br><br>K.CC: Count to tell the number of objects. Compare numbers. (Cluster Statement)   | Yes       |  |
|                     | 1.1 Compare two or more sets of objects (up to ten objects in each group) and identify which set is equal to, more than, or less than the other.  | Counting and Cardinality | 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.*<br><br>K.CC.7: Compare two numbers between 1 and 10 presented as written numerals.  | Yes       | *Note: Include groups up to ten objects.   |
|                     | 1.2 Count, recognize, represent, name, and order a number of objects (up to 30).  | Counting and Cardinality | K.CC.1: Count to 100 by ones and by tens.<br><br>K.CC.2: Count forward beginning from a given number within the known sequence (instead of having to begin at 1).<br><br>K.CC.3: Write numbers from 0–20. Represent a number of objects with written numeral 0 -20 (with 0 representing a count of no objects).<br><br>K.CC.5: Count to answer “how many?” questions about as many as 20 things arranged in a line, a | Partial   | CCS has students count to 30 and by ones and twos, but represent and write numbers to 20 instead of 30(CA).<br>CCS has students compare two numbers (written) but does not mention ordering numbers. |

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|------------------|---|-----------------------------------|---|-----------|------------------------------|
|                  |   |                                   | 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   |           |                              |
|                  | 1.3 Know that the larger numbers describe sets with more objects in them than the smaller numbers have. | Counting and Cardinality          | <p>K.CC.4: Understand the relationship between numbers and quantities; connect counting to cardinality.</p> <p>K.CC.4a: 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.</p> <p>K.CC.4b: 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.</p> <p><b>K.CC.4c: Understand that each successive number name refers to a quantity that is one larger.</b></p> <p><b>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.*</b></p> | Yes       |                              |
| 2.0 Number Sense | 2.0 Students understand and describe simple additions and subtractions.                                 | Operations and Algebraic Thinking | K.OA: (Cluster Statement) Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.  | Yes       |                              |

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|---|---|-----------------------------------|---|------------------|---|
|   | 2.1 Use concrete objects to determine the answers to addition and subtraction problems (for two numbers that are each less than 10).                                  | Operations and Algebraic Thinking | K.OA.1: Represent addition and subtraction with objects, fingers, mental images, drawings*, sounds (e.g., claps), acting out situations, verbal explanations, expressions or equations.<br><br>K.OA.2: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. | Yes              | *Note: Drawings need not show details, but should show the mathematics in the problem.  |
| 3.0 Number Sense                            | 3.0 Students use estimation strategies in computation and problem solving that involve numbers that use the ones and tens places.                                     |                                   |   | No               | CCS does not mention estimation of quantities except in the Mathematical Practice standards. Estimation is then described as "make conjectures about the form and meaning of the solution and detect possible errors by strategically using estimation and other mathematical knowledge." |
|   | 3.1 Recognize when an estimate is reasonable.   |                                   |   | No               | CCS does not mention estimation of quantities except in the Mathematical Practice standards. Estimation is then described as "make conjectures about the form and meaning of the solution and detect possible errors by strategically using estimation and other mathematical knowledge." |
| <b>Strand<br/>Algebra and<br/>Functions</b> | <b>CA Math Standard</b>   |                                   |   |                  |   |
| 1.0 Algebra and Functions                   | 1.0 Students sort and classify objects.   | Measurement and Data              | K.MD: Describe and compare measurable attributes.   | Yes              |   |
|   | 1.1 Identify, sort, and classify objects by attribute and identify objects that do not belong to a particular group (e.g., all these balls are green, those are red). | Measurement and Data              | K.MD.3: Classify objects into given categories; count the numbers of object in each category and sort the categories by count*.   | Yes              | *Note: Limit category counts to be less than or equal to 10.  |

| Strand                                 | CA Math Standard  | Domain               | Common Core Standard (CCS)   | Alignment | Comments in reference to CCS   |
|--|---|----------------------|--|-----------|--|
| <b>Strand Measurement and Geometry</b> | <b>CA Math Standard</b>   |                      |  |           |  |
| 1.0 Measurement and Geometry           | 1.0 Students understand the concept of time and units to measure it; they understand that objects have properties, such as length, weight, and capacity, and that comparisons may be made by referring to those properties. | Measurement and Data | K.MD: Describe and compare measurable attributes. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Cluster Statements)   | Partial   | 1.MD: (Cluster statement) Tell and write time.                                       |
|  | 1.1 Compare the length, weight, and capacity of objects by making direct comparisons with reference objects (e.g., note which object is shorter, longer, taller, lighter, heavier, or holds more).                          | Measurement and Data | K.MD.1: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.<br><br>K.MD.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. | Yes       |  |
|  | 1.2 Demonstrate an understanding of concepts of time (e.g., morning, afternoon, evening, today, yesterday, tomorrow, week, year) and tools that measure time (e.g., clock, calendar).                                       |                      |  | No        | 1.MD.3: Tell and write time in hours and half-hours using analog and digital clocks. |
|  | 1.3 Name the days of the week.  |                      |  | No        |  |
|  | 1.4 Identify the time (to the nearest hour) of everyday events (e.g., lunch time is 12 o’clock; bedtime is 8 o’clock at night).   |                      |  | No        | 1.MD.3: Tell and write time in hours and half-hours using analog and digital clocks. |
| 2.0 Measurement and Geometry           | 2.0 Students identify common objects in their environment and describe the geometric features.  | Geometry             | K.G: Identify and describe shapes (squares, circles, triangle, rectangle, hexagons, cubes, cones cylinders, and spheres). (Cluster Statement)  | Yes       |  |

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|--|---|---------------|--|------------------|--|
|  | 2.1 Identify and describe common geometric objects (e.g., circle, triangle, square, rectangle, cube, sphere, cone).               | Geometry      | K.G.2: Correctly name shapes regardless of their orientation or overall size.  | Yes              |  |
|  | 2.2 Compare familiar plane and solid objects by common attributes (e.g., position, shape, size, roundness, number of corners).    | Geometry      | K.G.2: Correctly name shapes regardless of their orientation or overall size.<br><br>K.G.4: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, difference, parts (e.g., number of sides and vertices/"corners") and other attribute (e.g., having sides of equal length). | Yes              |  |
| <b>Strand<br/>Statistics, Data<br/>Analysis, and<br/>Probability</b> | <b>CA Math Standard</b>   |               |  |                  |  |
| 1.0 Statistics, Data Analysis, and Probability                       | 1.0 Students collect information about objects and events in their environment.   |               |  | No               | 1.MD: (Cluster Statement) Represent and interpret data.  |
|  | 1.1 Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.                 |               |  | No               | 1.MD.4: Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. |
|  | 1.2 Identify, describe, and extend simple patterns (such as circles or triangles) by referring to their shapes, sizes, or colors. |               |  |                  | CCS does not mention patterns except in the Mathematical Practice Standards, :<br>"mathematically proficient students look closely to discern a pattern or structure (in problem solving.)   |

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|--|--|---------------------------------|---|------------------|-------------------------------------|
| <b>Strand<br/>Mathematical<br/>Reasoning</b> | <b>CA Math Standard</b>  |                                 |   |                  |                                     |
| 1.0 Mathematical Reasoning                   | 1.0 Students make decisions about how to set up a problem.   | Mathematical Practice Standards | K.MP.1: Make sense of problems and persevere in solving them.                       | Yes              |                                     |
|  | 1.1 Determine the approach, materials, and strategies to be used.                                  | Mathematical Practice Standards | K.MP.5: Use appropriate tools strategically.  | Yes              |                                     |
|  | 1.2 Use tools and strategies, such as manipulatives or sketches, to model problems.                | Mathematical Practice Standards | K.MP.4: Model with mathematics.<br><br>K.MP.5: Use appropriate tools strategically. | Yes              |                                     |
| 2.0 Mathematical Reasoning                   | 2.0 Students solve problems in reasonable ways and justify their reasoning.                        | Mathematical Practice Standards | K.MP.3: Construct viable arguments and critique the reasoning of others.            | Yes              |                                     |
|  | 2.1 Explain the reasoning used with concrete objects and/or pictorial representations.             | Mathematical Practice Standards | K.MP.4: Model with mathematics.   | Yes              |                                     |
|  | 2.2 Make precise calculations and check the validity of the results in the context of the problem. | Mathematical Practice Standards | K.MP.6: Attend to precision.  | Yes              |                                     |

## Kindergarten Common Core Standards not found in Kindergarten CA Mathematics Standards

| Domain                            | Common Core standard   | Found in CA Math standards |
|-----------------------------------|--|----------------------------|
| Counting and Cardinality          | K.CC.4a: 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 object.   | No                         |
| Counting and Cardinality          | K.CC.4b: 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.   | No                         |
| Operations and Algebraic Thinking | K.OA.3: 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 $5=4+1$ ).   | Yes<br>Grade One NS1.3     |
| Operations and Algebraic Thinking | K.OA.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.  | No                         |
| Operations and Algebraic Thinking | K.OA.5: Fluently add and subtract numbers within 5.  | Partial<br>Grade One NS2.1 |
| Number and Operations in Base Ten | K.NBT.1: 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 (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. | Yes<br>Grade One NS3.4     |
| Geometry                          | K.G.1: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above</i> , <i>below</i> , <i>beside</i> , <i>in front of</i> , <i>behind</i> and <i>next to</i> .   | Yes<br>Grade One MG2.4     |
| Geometry                          | K.G.3: Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").   | No                         |
| Geometry                          | K.G.4: Analyze and compare two- and three-dimensional shapes, in different size 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).   | Yes<br>Grade One MG2.2     |
| Geometry                          | K.G.5: Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.  | No                         |
| Geometry                          | K.G.6: Compose simple shapes to form larger shapes. <i>For example, "Can you join these two triangles with full sides touching to make a rectangle?"</i>   | Yes<br>Grade Two MG2.2     |

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|---|---|--|
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| 3.0 Number Sense                              | 3.1 Recognize when an estimate is reasonable.   | No.<br>CCS does not mention estimation of quantities except in the Mathematical Practice standards. Estimation is then described as “make conjectures about the form and meaning of the solution and detect possible errors by strategically using estimation and other mathematical knowledge.” |
| 1.0 Measurement and Geometry                  | 1.2 Demonstrate an understanding of concepts of time (e.g., morning, afternoon, evening, today, yesterday, tomorrow, week, year) and tools that measure time (e.g., clock, calendar). | Yes.<br>1.MD.3: Tell and write time in hours and half-hours using analog and digital clocks.   |
| 1.0 Measurement and Geometry                  | 1.3 Name the days of the week.  | No   |
| 1.0 Measurement and Geometry                  | 1.4 Identify the time (to the nearest hour) of everyday events (e.g., lunch time is 12 o’clock; bedtime is 8 o’clock at night).   | Yes.<br>1.MD.3: Tell and write time in hours and half-hours using analog and digital clocks.   |
| 1.0 Statistics Data Analysis, and Probability | 1.0 Students collect information about objects and events in their environment.   | Yes.<br>1.MD: (Cluster Statement) Represent and interpret data.  |
| 1.0 Statistics Data Analysis, and Probability | 1.1 Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.   | Yes.<br>1.MD.4: Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.   |