Table of Contents
Kindergarten Year-at-a-Glance ................................................................. 3
Unit #1: Counting and Cardinality Up to 20 .................................................. 4
Unit #2: Comparing Numbers and Objects .................................................. 13
Unit #3: Identify and Describe Shapes ......................................................... 20
Unit #4: Addition and Subtraction .............................................................. 27
Unit #5: Numbers 11-19 ........................................................................... 34
<table>
<thead>
<tr>
<th>Assessments</th>
<th>Month</th>
<th>Unit</th>
<th>Content Standards</th>
</tr>
</thead>
</table>
| Kindergarten Pre-Assessment        | September/October   | Unit #1 Counting and Cardinality Up to 20 | K.CC.1  
K.CC.2  
K.CC.3  
K.CC.4  
K.CC.5  
*K.CC.1  
*K.MD.3  
*K.G.1 |
| District Benchmark 1               | November/December  | Unit #2 Comparing Numbers and Objects     | K.CC.3  
K.CC.6  
K.CC.7  
*K.CC.1  
*K.MD.1  
*K.MD.2  
*K.G.2 |
| *Alignment TBD                     | January            | Unit #3 Identify and Describe Shapes      | K.G.1  
K.G.2  
K.G.3  
K.G.4  
K.G.5  
K.G.6  
*K.CC.1  
*K.OA.1 |
| District Benchmark 2               | Feb/March          | Unit #4 Addition and Subtraction          | K.OA.1  
K.OA.2  
K.OA.3  
K.OA.4  
K.OA.5  
*K.CC.1  
*K.OA.5 |
| *Alignment TBD                     | April/June         | Unit #5 Understanding Numbers 11-19       | K.NBT.1  
K.CC.3  
K.CC.6  
K.CC.7  
*K.CC.1  
*K.OA.5 |

*Standards to be taught on a regular basis throughout the year.
Unit #1: Counting and Cardinality Up to 20
(Approx. # Days - )
In this unit, students will work with numbers orally and in writing to twenty.

*K.CC.1, *K.MD.3, and *K.G.1 (Standards will be taught on a daily basis throughout this unit. (See Sequence of Learning Outcomes A-F)
In these standards, students will identify and describes objects in their environment using names of shapes and their position, and counting to 100.

Common Core State Standards-Mathematics:
Counting and Cardinality  K.CC
Know number names and the count sequence.
1. Count to 100 by ones and by tens.
2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
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).

Count to tell the number of objects
4. Understand the relationship between numbers and quantities; connect counting to cardinality.
5. 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. Compare numbers.

Measurement and Data  K.MD
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.

Geometry  K.G
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
1. 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.

Standards for Mathematical Practice:
SMP.1 Make sense of problems and persevere in solving them.
SMP.6 Attend to precision.
SMP.7 Look for and make use of structure.
SMP.8 Look for and express regularity in repeated reasoning.

SEL Competencies:
Self-awareness
Self-management
Social awareness
Relationship skills
Responsible decision making
ELD Standards to Support Unit:

Part I: Interacting in Meaningful Ways:
A. Collaborative:
   2. Interacting with others in written English in various communicative forms
   4. Adapting language choices to various contexts
B. Interpretive:
   5. Listening actively to spoken English in a range of social and academic contexts.
C. Productive:
   11. Supporting own opinions and evaluating others’ opinions in speaking and writing.

Part II: Learning About How English Works
A. Expanding and Enriching Ideas
   5. Modifying to add details.
B. Connecting and Condensing Ideas
   6. Connecting Ideas
   7. Condensing Ideas

Unit 1: Counting and Cardinality Up to 20

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g., EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that and are therefore connected to the Sequence of Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the</td>
<td>Assessments for Learning</td>
<td>*K.CC.1, *K.MD.3, *K.G.1</td>
<td>General Strategy Support for Unit: From the CA Mathematics Framework - &quot;Instructional Strategies&quot; chapter provides research-based strategies for teaching math, K-12. - &quot;Supporting High Quality Common Core Instruction&quot; chapter addresses the development, implementation, and maintenance</td>
<td>Differentiation, e.g. EL, SpEd, GATE</td>
<td>CCSS Support for Unit: CA Mathematics Framework “Grade K”, pp. 6-12, 28-29, explores the Counting and Cardinality and Measurement and Data domains; emphasizing students representing, relating, and operating on whole numbers and students classifying, counting, and sorting objects. Progressions for the CCSS-Math K–5 Progression on Counting and Cardinality and Operations and...</td>
</tr>
<tr>
<td>Note: The standards in this shaded section will be taught for on-going concept development throughout this unit. Students will be able to...</td>
<td>Sequence of Learning Outcomes</td>
<td>Strategies for Teaching and Learning</td>
<td>Differentiation e.g., EL, SpEd, GATE</td>
<td>Resources</td>
<td></td>
</tr>
</tbody>
</table>

Draft
## Unit 1: Counting and Cardinality Up to 20

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Outcomes.</td>
<td>Sequence of Learning Outcomes. Note: These assessments are suggested, not required. Pre-Assessment: K-Year Long Assessment, from Charlotte Area Mathematics Consortium, 2011</td>
<td>of high-quality, standards-based mathematics instructional programs.</td>
<td>special populations – To be completed by district experts).</td>
<td>Algebraic Thinking KS Assoc. of Teachers of Mathematics FLIPBOOK “Grade K”, 2012, pp. 4-10, 27-28 address the Counting and Cardinality standards related to this unit.</td>
<td></td>
</tr>
<tr>
<td>A. Classify objects into given categories. K.MD.3</td>
<td>For setting up cooperative learning: <a href="https://www.teachingchannel.org/videos/seating-arrangements">https://www.teachingchannel.org/videos/seating-arrangements</a> Describe objects based on their attributes using concrete objects. Categorize groups of objects based on their attributes (e.g., shapes, color, and size).</td>
<td>enVision, Topic 13: “Sorting, Classifying, Counting, and Categorizing Data” 13-1 “Same and Different” 13-2 “Sorting by One Attribute” 13-3 “Sorting the Same Set in Different Ways” 13-4 “Sorting by More Than One Attribute”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Count the numbers of objects in a category. K.MD.3</td>
<td>Let's Count! Learning Numbers in Multiple Ways, video from Teaching Channel Count the number of objects sorted by categories with no more than 10 objects in each category.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Unit 1: Counting and Cardinality Up to 20

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g., EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Sort categories of objects by count.</td>
<td></td>
<td>K.CC.1, *K.MD.3, *K.G.1</td>
<td>Classify and sort by similarities and differences (e.g., size, color, shape).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Describe objects in their environment using the names of two-dimensional shapes (e.g., squares, circles, triangles, rectangles, and hexagons).</td>
<td></td>
<td></td>
<td>Use the names of shapes when describing the object.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Describe objects in the environment and their relative position such as above, below, beside, in front of, behind, and next to.</td>
<td></td>
<td></td>
<td>Describe objects in the classroom. Identify their location using appropriate vocabulary. Hide shapes around the classroom and ask students to find the shapes and describe their position. Students determine position when teacher asks questions such as, “Which way?”, “How far?”, “Where?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Count to 100.</td>
<td></td>
<td>K.CC.1</td>
<td>Count by ones.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Resources:
### Unit 1: Counting and Cardinality Up to 20

#### Essential Questions
- How many different ways can you represent a given number?
- What does zero mean?

#### Assessments for Learning
- Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning Outcomes.
- Note: These assessments are suggested, not required.

#### Sequence of Learning Outcomes
- Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session.
- Each Outcome begins with Students will be able to...

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation Support for Unit:</th>
</tr>
</thead>
</table>
| Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that and are therefore connected to the Sequence of Learning Outcomes. | Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning Outcomes. | Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session. Each Outcome begins with Students will be able to... | Counting by ones up to 100 is a year-long process. Unit 1 focuses on counting up to 20. General Strategy Support for Unit: From the CA Mathematics Framework:
  - “Supporting High Quality Common Core Instruction” chapter addresses the development, implementation, and maintenance of high-quality, standards-based mathematics instructional programs. | Use of math journals for differentiation and formative assessment (use link below) Math Journals: A Record for Students and Teachers, lesson from Teaching Channel; lesson objective: recording thinking in individual journals Flexible grouping:
  - Content
  - Interest
  - Project/product
  - Level (Heterogeneous/Homogeneous)
  - Tiered:
    - Independent Management Plan (Must Do/ May Do)
    - Grouping
      - Content
      - Rigor w/in the concept
      - Project-based |

| How many different ways can you represent a given number? | 1. Count aloud by ones from 0 to 10, using manipulatives (for example counting geometric shapes: circles, squares, triangles in addition to number lines, five/ten frames). When counting, the order of direction does not matter (for example, counting objects from right to left, left to right, top to bottom, bottom to top, etc.). K.CC.4b |

| What does zero mean? | Can begin implementing strategies that build to the “Celebrate 100 Days of School” which reinforces counting up to 100. Learning geometric shapes focus on circles, squares, and triangles. Skip Counting With Counting Collections, a video from Teaching Channel; lesson objective: record strategies when skip counting by 5s and 10s Bundle objects such as straws, linking cubes, popsicle sticks, etc. into groups of ten. |

#### Resources
- CCSS Support for Unit: CA Mathematics Framework “Grade K” pp. 6-12, explores the Counting and Cardinality domain; emphasizing students representing, relating, and operating on whole numbers and students counting objects. Progressions for the CCSS-Math K–5 Progression on Counting and Cardinality and Operations and Algebraic Thinking KS Assoc. of Teachers of Mathematics FLIPBOOK “Grade K”, 2012, pp. 4-10 address the Counting and Cardinality standards related to this unit.

- enVision, Topic 2: “Six to Ten” 2-6 “The Number 0”
- enVision, Topic 3: Lesson 3-1 “Counting 6 and 7” 3-3 “Counting 8 and 9” 3-5 “Counting 10”
# Unit 1: Counting and Cardinality Up to 20

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation (e.g., EL/SpEd/GATE)</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can grouping help me count?</td>
<td></td>
<td></td>
<td>2. Recognize a group of numbers (0-5) as a quantity without having to count by ones, regardless of position of objects. K.CC.4b</td>
<td></td>
<td>enVision, Topic 1: Lessons 1-2 &quot;Counting 1, 2, and 3 in Different Arrangement&quot; 1-5 &quot;Counting 4 and 5 in Different Arrangement&quot;</td>
</tr>
<tr>
<td>Why can you count from any given number? How do you know what number comes next in the sequence?</td>
<td>KCC Task 1.doc, from Public School of North Carolina Wikispace</td>
<td>K.CC.1, K.CC.2, K.CC.3, K.CC.4, K.CC.5</td>
<td>Five Frames, 2 blank five frames and dot-filled five frames. Other models to develop instantaneously seeing quantity without counting (subtilizing): dot cards, dominos, linking cubes, etc.</td>
<td>Learning o Homework o Grouping o Formative Assessment</td>
<td>Additional Tracing Pages: o Alphabet-Number-Shape-Tracing o Alphabet-Number Tracing o Count-Write How Many</td>
</tr>
<tr>
<td></td>
<td>KCC Task 4.doc, from Public School of North Carolina Wikispace</td>
<td></td>
<td>3. Understand that the next number in the sequence is one more than the previous number. K.CC.4c</td>
<td>Anchor Activities: o Content-related tasks for early finishers o Game o Investigation o Partner Activity o Stations</td>
<td></td>
</tr>
<tr>
<td>KCC Task 2a.doc, and KCC Task 3b.doc, from Public School of North Carolina Wikispace: o CC Task 2a o CC Task 3b o CC Task 3b Blackline Masters</td>
<td></td>
<td></td>
<td>4. Given any quantity between 0-10, use the strategy of counting on up to 10. K.CC.2</td>
<td>Depth and Complexity Prompts/Icons: o Depth o Language of the Discipline o Patterns o Unanswered Questions o Rules o Trends o Big Ideas o Complexity</td>
<td>Beyond Fingers: Place Value &amp; the Numbers 11-19, a video of a kindergarten lesson with numbers 11-19 on a ten frame; lesson objective: understand the numbers 11-19 as 10 ones and some further ones; from Teaching Channel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Count objects in the classroom; e.g., count the number of chairs of the students who are absent, count the number of windows, shoes, triangles, circles, etc. (Framework, p7).</td>
<td>See Differentiation Resources at: <a href="http://scusd-math.wikispaces.com/home">http://scusd-math.wikispaces.com/home</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>How Many Dot; cards A-B, from Silicon Valley Mathematics Initiative</td>
<td></td>
<td>5. Using a five frame and a ten frame, recognize a group of numbers (0-10) as a quantity of five ones and some more</td>
<td>Five Frames-Counters, blank five frame templates and five frames filled with dots. Ten Frames-Counters, blank ten frame template</td>
<td></td>
</tr>
</tbody>
</table>
## Unit 1: Counting and Cardinality Up to 20

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation (e.g., EL/SpEd/GATE)</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>(administered whole-group, small-group, one-on-one)</td>
<td>ones.</td>
<td>K.CC.5</td>
<td></td>
<td></td>
<td>Count and Match Worksheet</td>
</tr>
<tr>
<td></td>
<td>6. Count objects in a set, where the last number said is the total number of objects.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Recognize the written numerals for 0-10 and match them to given sets of objects.</td>
<td></td>
<td></td>
<td></td>
<td>Count and Match Worksheets:</td>
</tr>
<tr>
<td></td>
<td>8. Trace numbers 0-10; represent the numbers with a visual and/or object, and say the numbers aloud.</td>
<td></td>
<td></td>
<td></td>
<td>enVision, Topic 1: Lessons</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-3 “Reading and Writing 1, 2, and 3”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-6 “Reading and Writing 4 and 5”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>enVision, Topic 2: Lesson</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2-7 “Reading and Writing 0”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>enVision, Topic 3: Lessons</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-3 “Reading and Writing 6 and 7”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-4 “Reading and Writing 8 and 9”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-6 “Reading and Writing 10”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For writing numbers, students will trace the numbers using dotted/dashed templates:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Count and Trace 1-10 a</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Count and Trace 1-10 b</td>
</tr>
</tbody>
</table>

**Public School of North Carolina Wikispaces:**
Student forms: SF_KCC_5b.doc, SF_KCC_5b-2doc, SF_KCC_5b-3doc

**enVision**, Topic 1: Lessons
1-3 “Reading and Writing 1, 2, and 3”  
1-6 “Reading and Writing 4 and 5”  

**enVision**, Topic 2: Lesson  
2-7 “Reading and Writing 0”  

**enVision**, Topic 3: Lessons  
3-3 “Reading and Writing 6 and 7”  
3-4 “Reading and Writing 8 and 9”  
3-6 “Reading and Writing 10”  

For writing numbers, students will trace the numbers using dotted/dashed templates:  
• Count and Trace 1-10 a  
• Count and Trace 1-10 b
# Unit 1: Counting and Cardinality Up to 20

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation (e.g., EL/SpEd/GATE)</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Count aloud by ones from 0 -20, using manipulatives (for example counting geometric shapes: rectangles and hexagons, in addition to number lines, ten frames).</td>
<td>Counting objects 0-20 should be arranged in a line, a rectangular array, or a circle, or as many as ten objects in a scattered configuration. Include varied counting sequences such as counting by ones, teens, and “crossing the decade” (see pg. 7 of the Framework). Learning geometric shapes focus on rectangles and hexagons.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Given any quantity between 0-20, use the strategy of counting on up to 20 orally and with objects to answer, “How many?”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>How Many Dots</strong> Assessment Cards C-E, from Silicon Valley Mathematics Initiative (administered whole-group, small-group, one-on-one)</td>
<td>11. Using two ten frames, recognize a group of numbers (11-20) as a quantity of ten ones and some more ones.</td>
<td>The use of ten frames will lead to learning how to use arrays in later years. How can you use a ten frame to represent a number?</td>
<td></td>
<td></td>
<td>Tens Frames, 2 blank tens frames and dot-filled tens frames Quick Images: Visualizing Number Combinations, a video from Teaching Channel; using quick images to identify combinations of</td>
</tr>
<tr>
<td>Essential Questions</td>
<td>Assessments for Learning</td>
<td>Sequence of Learning Outcomes</td>
<td>Strategies for Teaching and Learning</td>
<td>Differentiation (e.g., EL/SpEd/GATE)</td>
<td>Resources</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------</td>
<td>-------------------------------</td>
<td>-------------------------------------</td>
<td>---------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>12. Recognize the written numerals for 0-20 and match them to given sets of objects. K.CC.3</td>
<td>KCC Task 5c.doc, from Public School of North Carolina Wikispace</td>
<td>K.CC.1, K.CC.2, K.CC.3, K.CC.4, K.CC.5</td>
<td>For writing numbers, use a variety of “writing instruments” such as sand, clay, finger in the air, etc. Count-Trace-Write worksheet</td>
<td>Counting and matching worksheets to 20: Count and Match, Count and Match 2, Count and Match 3</td>
<td></td>
</tr>
</tbody>
</table>
Unit #2: Comparing Numbers and Objects

(Approx. # Days - )

Content Standards: K.CC.3, K.CC.6, and K.CC.7 (See Sequence for Learning Outcomes 1-8)

In this unit, students will use their understanding of numbers to compare size and amount.

*K.CC.1, *K.MD.1, *K.MD.2, and *K.G.2 (Standards will be taught on a daily basis throughout this unit. See Sequence of Learning Outcomes A-D)

In these standards, students will describe objects using measurable attributes and counting to 100.

<table>
<thead>
<tr>
<th>Common Core State Standards-Mathematics:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counting and Cardinality K.CC</td>
</tr>
<tr>
<td>Know number names and the count sequence.</td>
</tr>
<tr>
<td>1. Count to 100 by ones and by tens.</td>
</tr>
</tbody>
</table>

| K.CC |
| Know number names and the count sequence. |
| 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). |
| Compare numbers. |
| 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. |
| 7. Compare two numbers between 1 and 10 presented as written numerals. |

| Measure and Data K.MD |
| Describe and compare measurable attributes. |
| 1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. |
| 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. For example, directly compare the height of two children and describe one child as taller/shorter. |

| Geometry K.G |
| Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). |
| 2. Correctly name shapes regardless of their orientations or overall size. |
Standards for Mathematical Practice:

All the SMPs are embedded within the tasks chosen to support the Sequence of Learning Experiences.

SMP.3 Construct viable arguments and critique the reasoning of others.
SMP.5 Use appropriate tools strategically.
SMP.6 Attend to precision.

ELD Standards to Support Unit:

Part I: Interacting in Meaningful Ways:

A. Collaborative:
   1. Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics.
   2. Interacting with others in written English in various communicative forms.
   3. Offering and supporting opinions and negotiating with others in communicative exchanges.

B. Interpretive:
   5. Listening actively to spoken English in a range of social and academic contexts.

C. Productive:
   11. Supporting own opinions and evaluating others’ opinions in speaking and writing.

Part II: Learning About How English Works

B. Expanding and Enriching Ideas
   5. Modifying to add details.

C. Connecting and Condensing Ideas
   6. Connecting Ideas

SEL Competencies:

- Self-awareness
- Self-management
- Social awareness
- Relationship skills
- Responsible decision making
## Unit #2: Comparing Numbers and Objects

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g., EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do we know when we move an object, its length stays the same?</td>
<td>A. Identify measureable attributes of objects. K.MD.1</td>
<td>*K.CC.1, *K.MD.1, *K.MD.2, *K.G.2</td>
<td>Note: <em>This standard focuses on students using descriptive words rather than sorting objects based on attributes.</em> Attributes could include color, number of sizes, shape, etc.</td>
<td>enVision, Topic 12: “Measurement”</td>
<td></td>
</tr>
<tr>
<td>How can measuring an object help with comparing it to another object?</td>
<td>B. Describe objects using attributes such as length, size, and weight. K.MD.1</td>
<td></td>
<td></td>
<td>enVision, Topic 12: Lessons 12-1 “Describing Objects by More Than One Attribute” 12-3 “More Comparing Objects by Length”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C. Use measureable attributes to compare two objects, using comparison language such as “more of” and “less of”. K.MD.2</td>
<td></td>
<td>Students focus on specific attributes when making verbal comparisons (e.g., when comparing 3 rectangles, students focus on length).</td>
<td>enVision, Topic 12: Lessons 12-3 “More Comparing Objects by Length” 12-4 “Problem Solving: Try, Check, and Revise”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D. Count to 100. K.CC.1</td>
<td></td>
<td>Count by ones and tens. Count by 1s from any given number.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Unit #2: Comparing Numbers and Objects

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning Outcomes. Note: These assessments are suggested, not required. | Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session. Each Outcome begins with Students will be able to... | General Strategy Support for Unit: From the CA Mathematics Framework  
- "Instructional Strategies" chapter provides research-based strategies for teaching math, K-12.  
- "Supporting High Quality Common Core Instruction" chapter addresses the development, implementation, and maintenance of high-quality, standards-based mathematics instructional programs. | Differentiation Support for Unit: Use of math journals for differentiation and formative assessment (use link below)  
Math Journals: A Record for Students and Teachers, lesson from Teaching Channel; lesson objective: recording thinking in individual journals  
Flexible grouping:  
- Content  
- Interest  
- Project/product  
- Level (Heterogeneous/Homogeneous)  
Tiered:  
- Independent Management Plan (Must Do/May Do)  
- Grouping  
  - Content  
  - Rigor w/in the concept  
  - Project-based | CCSS Support for Unit:  
CA Mathematics Framework "Grade K" pp. 6-12, explores the Counting and Cardinality domain; emphasizing students representing, relating, and operating on whole numbers and students counting objects.  
Progressions for the CCSS-Math K–5 Progression on Counting and Cardinality domain.  
KS Assoc. of Teachers of Mathematics FLIPBOOK "Grade K", 2012, pp. 4-10 address the Counting and Cardinality standards related to this unit. | Resources |
| Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that and are therefore connected to the Sequence of Learning Outcomes. | | | |
| **Count and Compare Sides** | 1. Count the sides of triangles, squares, rectangles, and hexagons and compare the number of sides. K.CC.7 | | |
| **Count and Compare Sides** | 1. Count the sides of triangles, squares, rectangles, and hexagons and compare the number of sides. K.CC.7 | | |
| **Shape Tracing Worksheets:** |  
- Shapes Trace 1  
- Shapes Trace 2  
- Shapes Trace 3  
- Shapes Trace 4 | | |
# Unit #2: Comparing Numbers and Objects

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you know that 3 is less than 4? How can I prove that groups are equal?</td>
<td>Domino Sort-Assessment, from Silicon Valley Mathematics Initiative (administered one-on-one)</td>
<td>K.CC.3, K.CC.6, K.CC.7</td>
<td>Students use one-to-one correspondence, repeatedly matching one object from one set with one object from the other set to determine which see has more objects. Teacher ask probing questions, such as, “How do you know?” to elicit student thinking and reasoning (Framework, p.13). Students count the objects in each set and then identify which set has more, less, or an equal number of objects (Framework, p.13) and describe the differences (Framework, p.24).</td>
<td>learning o Homework o Grouping o Formative Assessment Anchor Activities: ▪ Content-related Tasks for early finishers o Game o Investigation o Partner Activity o Stations Depth and Complexity Prompts/Icons: ▪ Depth o Language of the Discipline o Patterns o Unanswered Questions o Rules o Trends o Big Ideas ▪ Complexity See Differentiation Resources at: <a href="http://scusd-math.wikispaces.com/home">http://scusd-math.wikispaces.com/home</a></td>
<td>enVision, Topic 2: “Comparing and Ordering 0-5” 2-1 “More, Fewer, and Same As” 2-2 “1 and 2 More” 2-3 “1 and 2 Fewer” 2-4 “As Many, More, and Fewer” 2-5 “Comparing Numbers Through 5” 2-9 “Problem Solving: Use Objects”</td>
</tr>
<tr>
<td></td>
<td>A Visit to the Farm, from Silicon Valley Mathematics Initiative</td>
<td></td>
<td>Introduce students to 0, 5, &amp; 10 as benchmark numbers to help students further develop their sense of quantity as well as their ability to compare numbers. Benchmarks of 5 &amp; 10 are especially useful with the 5-group patterns (Framework, p.13)</td>
<td></td>
<td>enVision, Topic 4: “Comparing and Ordering Numbers 0-10” 4-4 “1 More” 4-5 “1 Fewer” 4-6 “2 More” 4-7 “2 Fewer”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Enrollment, Topic 4: Lessons 4-1 “Comparing Numbers Through 10” 4-2 “Comparing Numbers to 5” 4-3 “Comparing Numbers to 10”</td>
<td></td>
</tr>
<tr>
<td>Essential Questions</td>
<td>Assessments for Learning</td>
<td>Sequence for Learning Outcomes K.CC.3, K.CC.6, K.CC.7</td>
<td>Strategies for Teaching and Learning</td>
<td>Differentiation e.g. EL, SpEd, GATE</td>
<td>Resources</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>--------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>4. Compare pairs or sets and support this understanding by describing measurable attributes such as height, color, number of sides, etc.</td>
<td></td>
<td></td>
<td>Make comparisons between real world objects with significant weight differences such as a car and a tricycle. Measure objects using a balance beam scale. Measure lengths of objects in the classroom using non-standard units of measures such as paper clips, pencil, blocks, etc. Interactive Fruit Balance Scale: Mr. Pips Fruit Balance</td>
<td></td>
<td>enVision, Topic 12: Lessons 12-5 “Comparing By Height” 12-6 “More Comparing Objects by Height” 12-7 “Comparing Capacities” More/Fewer Worksheet More vs Fewer Worksheet</td>
</tr>
<tr>
<td>How can measuring an object help with comparing it to another object?</td>
<td>Comparing Length and Weight</td>
<td>5. Compare pairs or sets by measuring length and weight.</td>
<td></td>
<td></td>
<td>enVision, Topic 12: Lesson 12-8 “Comparing by Weight” • Math Background, p 237A • Problem-Based Interactive Learning, p. 237 • Develop the Concept: Visual, pp. 238-238A • Differentiated Instruction, p. 238C Intervention/“Look and See” Center Activity</td>
</tr>
<tr>
<td>6. Compare two numbers from 1 to 10 represented as written numerals.</td>
<td></td>
<td></td>
<td>Make two sets of objects by counting to specific quantities and write the corresponding numerals. Students explain their reasoning. Use a number line, 100’s chart, or a counting frame to compare quantities.</td>
<td></td>
<td>enVision, Topic 4: Lessons 4-8 “Ordering Numbers to 10” 4-9 “Ordering Numbers on a Number Line” 4-10 “Problem Solving: Use Objects”</td>
</tr>
<tr>
<td>Comparing Numbers</td>
<td>7. Justify their reasoning when comparing two written numerals by drawing pictures, manipulating objects,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Essential Questions</td>
<td>Assessments for Learning</td>
<td>Sequence for Learning Outcomes K.CC.3, K.CC.6, K.CC.7</td>
<td>Strategies for Teaching and Learning</td>
<td>Differentiation e.g. EL, SpEd, GATE</td>
<td>Resources</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------</td>
<td>-------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>--------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>or orally. K.CC.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Write numerals 0-20. K.CC.3</td>
<td></td>
<td>For writing numbers, use a variety of “writing instruments” such as sand, clay, finger in the air, etc.</td>
<td></td>
<td>Count, Print, and Trace Numbers 1-20 worksheet</td>
<td></td>
</tr>
</tbody>
</table>
# Unit #3: Identify and Describe Shapes

(Approx. # Days - )


In this unit, students will identify and describe two and three-dimensional shapes.

*K.CC.1 and *K.OA.1 (See Sequence for Learning Outcomes A-B)

In these units, students will be able to count to 100 and count to determine how many objects are represented in addition and subtraction stories.

## Common Core State Standards-Mathematics:

### Geometry  K.G

**Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).**

1. 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.
2. Correctly name shapes regardless of their orientations or overall size.
3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

**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, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).
5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
6. Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

### Measurement and Data  K.MD

**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.

### Counting and Cardinality  *K.CC

**Know number names and the count sequence.**

1. Count to 100 by ones and by tens.

### Operations and Algebraic Thinking  *K.OA

**Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.**

1. Represent addition and subtraction with objects, fingers, mental images, drawings, 2 sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
### Standards for Mathematical Practice:
- SMP.2 Reason abstractly and quantitatively.
- SMP.4 Model with mathematics.
- SMP.6 Attend to precision.

### ELD Standards to Support Unit:
#### Part I: Interacting in Meaningful Ways:
- **Collaborative:**
  3. Interacting with others in written English in various communicative forms
  6. Adapting language choices to various contexts
- **Interpretive:**
  5. Listening actively to spoken English in a range of social and academic contexts
  6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language

- **Productive:**
  11. Supporting own opinions and evaluating others’ opinion in speaking and writing.

#### Part II: Learning About How English Works
- **B. Expanding and Enriching Ideas**
  5. Modifying to add details.
- **C. Connecting and Condensing Ideas**
  6. Connecting Ideas

### SEL Competencies:
- Self-awareness
- Self-management
- Social awareness
- Relationship skills
- Responsible decision making
## Unit #3: Identify and Describe Shapes

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g., EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that and are therefore connected to the Sequence of Learning Outcomes. | Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning Outcomes. | Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session. Each Outcome begins with Students will be able to... Note: The standards in this shaded area will be taught for on-going concept development throughout this unit. | General Strategy Support for Unit: From the CA Mathematics Framework  
- “Supporting High Quality Common Core Instruction” chapter addresses the development, implementation, and maintenance of high-quality, standards-based mathematics instructional programs. | Differentiation, e.g., EL, SpEd, GATE  
- An illustrative list of high-leverage strategies to meet the needs of all students.  
- Strategies for differentiation for special populations – To be completed by district experts). | CCSS Support for the Unit:  
CA Mathematics Framework "Grade K", pages 6-14 address the Counting and Cardinality domain, and pages 14-27 explores the Operations and Algebraic Thinking domain.  
KS Assoc. of Teachers of Mathematics FLIPBOOK "Grade K" provides illustrated examples, instructional strategies, additional resources/tools and misconceptions by standard. |

### A. Count to 100 by ones and tens from any given number.  
K.CC.1

Bundle objects such as straws, linking cubes, popsicle sticks, etc. into groups of ten.

### B. Represent addition and subtraction stories with objects, sounds (e.g., claps), and acting out situations.  
K.OA.1

Note: The focus of this experience is on understanding the concept of adding and subtracting without the written equation and symbols. For example, teacher uses objects to act out a story while students count to see how many now.
## Unit #3: Identify and Describe Shapes

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes K.G.1-K.G.6 and K.MD.3</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that and are therefore connected to the Sequence of Learning Outcomes. Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning Outcomes. Note: These assessments are suggested, not required. Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session. Each Outcome begins with Students will be able to... General Strategy Support for Unit: From the CA Mathematics Framework • “Instructional Strategies” chapter provides research-based strategies for teaching math, K-12. • “Supporting High Quality Common Core Instruction” chapter addresses the development, implementation, and maintenance of high-quality, standards-based mathematics instructional programs. Differentiation Support for Unit: Use of math journals for differentiation and formative assessment (use link below) Math Journals: A Record for Students and Teachers, lesson from Teaching Channel; lesson objective: recording thinking in individual journals Flexible grouping:
  - Content
  - Interest
  - Project/product
  - Level (Heterogeneous/Homogeneous) CCSS Support for Unit CA Mathematics Framework "Grade K", pages 28-37 explores the Geometry domain. KS Assoc. of Teachers of Mathematics FLIPBOOK "Grade K" provides illustrated examples, instructional strategies, additional resources/tools and misconceptions by standard; pages 27-39 address Geometry domain. Geometric Progressions- Grade K; narrative documents describing the progression of a topic across a number of grade levels, informed both by research on children's cognitive development and by the logical structure of mathematics, pages 6-7 address Geometry domain. |

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that and are therefore connected to the Sequence of Learning Outcomes. Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning Outcomes. Note: These assessments are suggested, not required. Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session. Each Outcome begins with Students will be able to... General Strategy Support for Unit: From the CA Mathematics Framework • “Instructional Strategies” chapter provides research-based strategies for teaching math, K-12. • “Supporting High Quality Common Core Instruction” chapter addresses the development, implementation, and maintenance of high-quality, standards-based mathematics instructional programs. Differentiation Support for Unit: Use of math journals for differentiation and formative assessment (use link below) Math Journals: A Record for Students and Teachers, lesson from Teaching Channel; lesson objective: recording thinking in individual journals Flexible grouping:
  - Content
  - Interest
  - Project/product
  - Level (Heterogeneous/Homogeneous) CCSS Support for Unit CA Mathematics Framework "Grade K", pages 28-37 explores the Geometry domain. KS Assoc. of Teachers of Mathematics FLIPBOOK "Grade K" provides illustrated examples, instructional strategies, additional resources/tools and misconceptions by standard; pages 27-39 address Geometry domain. Geometric Progressions- Grade K; narrative documents describing the progression of a topic across a number of grade levels, informed both by research on children's cognitive development and by the logical structure of mathematics, pages 6-7 address Geometry domain. | | | | | |
# Unit #3: Identify and Describe Shapes

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes K.G.1-K.G.6 and K.MD.3</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
</table>
| • What happens when we change a shape’s position or orientation? | Assessments/Tasks aligned to learning outcomes: Note: These Assessments are suggested, not required. | Students will be able to...  
1. Identify, describe, and draw two-dimensional shapes such as squares, circles, triangles, rectangles, and hexagons; regardless of their orientation and overall size. | Note: Help students to understand that two-dimensional shapes are a part of three-dimensional shapes, but have different names (the face of a pyramid is a triangle). Students complete jigsaw puzzles to build spatial relationship and develop problem-solving skills. **Tangram Puzzles**: *National Council of Teachers of Mathematics*, a website where students can interact with tangram shapes **Shape Hunt Chant**, a shapes chant from Georgia Department of Education | Tiered:  
• Independent Management Plan (Must Do/May Do)  
• Grouping  
  ○ Content  
  ○ Rigor w/in the concept  
  ○ Project-based learning  
  ○ Homework  
  ○ Grouping  
  ○ Formative Assessment  
Anchor Activities:  
• Content-related tasks for early finishers  
  ○ Game  
  ○ Investigation  
  ○ Partner Activity  
  ○ Stations  
Depth and Complexity Prompts/Icons:  
• Depth  
  ○ Language of the Discipline  
  ○ Patterns  
  ○ Unanswered Questions | **enVision, Topic 14: Lessons**  
Refer to shaded portion of Unit 1 Learning Outcomes D and E for review  
**Shape Hunt**, activity and chant, from Georgia Department of Education |

| • How can you put shapes together to form a new shape? |  | 2. Compose simple shapes to form larger shapes such as two triangles to form one rectangle. | Students use tangram shapes to complete simple puzzles such as outlined version of a given shape. Students use tangram shapes or precut shapes to form larger shapes or new shapes. |  | **enVision, Topic 16: Lessons**  
16-2 “Making Shapes from Other Shapes” |
# Unit #3: Identify and Describe Shapes

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes K.G.1-K.G.6 and K.MD.3</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
</table>
| • How can I use my understanding of two-dimensional shapes to categorize three-dimensional shapes?  
• How can I compare and contrast two and three-dimensional shapes? | | | | | enVision, Topic 14: Lessons  
14-6 “Solid Figures”  
14-7 “Flat Surfaces of Solid Figures”  
14-8 “Problem Solving: Use Objects” |
| How can I use my understanding of two-dimensional shapes to categorize three-dimensional shapes? | | | | | enVision, Topic 16: Lessons  
16-1 “Creating 2-D Shapes”  
16-3 “Comparing Solid Figures”  
16-5 “Problem Solving: Use Logical Reasoning” |
| How can I use my understanding of two-dimensional shapes to categorize three-dimensional shapes? | | | | | |
| How can I compare and contrast two and three-dimensional shapes? | 2 and 3-D Shapes Assessment, coloring two-dimensional objects | | | | |
| | 3. Identify, describe, and create three-dimensional shapes: cubes, cones, cylinders, and spheres; regardless of their orientation and overall size. K.G.2, K.G.3 | Hide a shape in a bag and have students determine the name of the shape based on the given attributes.  
Students use popsicle sticks, straws, and clay balls to form three-dimensional shapes; describing and defining the parts and attributes of the shapes (e.g. thickness).  
Students can bring in empty containers representing three-dimensional shapes.  
Students engage in hands-on/ tactile-kinesthetic exploration of two and three-dimensional shapes, by feeling shapes hidden in a box (NTCM, 2011) | | | |
| | 4. Describe and objects in their environment using names of three-dimensional shapes. K.G.1, K.G.3 | Play “I Spy” using colors and shape words. | | | |
| | 5. Identify shapes as two-and three-dimensional and distinguish the differences between them, including number of sides and | Play a matching game with cards: pictures, words, and objects. | | | |

**Rules**  
**Trends**  
**Big Ideas**  
**Complexity**  
See Differentiation Resources at: [http://scusd-math.wikispaces.com/home](http://scusd-math.wikispaces.com/home)
# Unit #3: Identify and Describe Shapes

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes K.G.1-K.G.6 and K.MD.3</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• How can we sort objects?</td>
<td>Two and Three -Dimensional Shape Sort Assessment</td>
<td>vertices/corners, and other attributes (having sides of equal lengths, etc.) K.G.4</td>
<td></td>
<td></td>
<td>enVision, Topic 9: More Addition and Subtraction 9-9 “Problem Solving: Making a Graph”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Classify shapes or objects into given categories and count the number of objects in each, and sort the categories by count (greater or less than). K.MD.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Build and draw shapes by using components such as sticks, clay balls, and play dough. K.G.5</td>
<td>Provide opportunities for students to explore shapes using a variety of materials (e.g. shaving cream, sand, paint, construction paper, Legos, straws, strings, etc.) Play Dough Shapes, a website from PBS Kids, an activity to help children identify shapes and make patterns Clay 3-D Shapes, a word document with links to activity</td>
<td></td>
<td>enVision, Topic 16: Lessons 16-4 “Building with Solid Figures”</td>
</tr>
</tbody>
</table>
Unit #4: Addition and Subtraction
(Approx. # Days - )
Content Standards: K.OA.1, K.OA.2, K.OA.3, K.OA.4, and K.OA.5 (See Sequence for Learning Outcomes 1-8)
In this unit, students will understand and apply the concept of addition and subtraction within ten, while developing fluency within five.

*K.CC.1 and *K.OA.5 (Standards will be taught on a daily basis throughout this unit. See Sequence of Learning Outcomes A-B)
In these standards, students will count to 100 and fluently add and subtract within five.

Common Core State Standards-Mathematics:

Operations and Algebraic Thinking  K.OA
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
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).
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.
5. Fluently add and subtract within 5.

Counting and Cardinality  *K.CC
Know number names and the count sequence.
1. Count to 100 by ones and by tens.

Standards for Mathematical Practice:

SMP.1 Make sense of problems and persevere in solving them.
SMP.4 Model with mathematics.
SMP.6 Attend to precision.
SMP.7 Look for and make use of structure.

SEL Competencies:
Self-awareness
Self-management
Social awareness
Relationship skills
Responsible decision making
## ELD Standards to Support Unit:

### Part I: Interacting in Meaningful Ways:

**A. Collaborative:**
- 2. Interacting with others in written English in various communicative forms
- 4. Adapting language choices to various contexts

**B. Interpretive:**
- 5. Listening actively to spoken English in a range of social and academic contexts
- 6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language

**C. Productive:**
- 10. Composing/writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology
- 11. Supporting own opinions and evaluating others’ opinion in speaking and writing.
- 12. Selecting and applying varied and precise vocabulary and language structure to convey ideas

### Part II: Learning About How English Works

**B. Expanding and Enriching Ideas**
- 5. Modifying to add details.

---

### Unit #4: Addition and Subtraction

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes *K.CC.1, *K.OA.5</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that are therefore connected to the | Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning | Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session. Each Outcome begins with Students will be able to... | General Strategy Support for Unit: From the CA Mathematics Framework
- “Supporting High Quality Common Core Instruction” chapter addresses the development, implementation, and maintenance of high-quality, | Differentiation, e.g. EL, SpEd, GATE
- An illustrative list of high-leverage strategies to meet the needs of all students.
- Strategies for | CCSS Support for Unit
CA Mathematics Framework "Grade K", pages 6-7 address the Counting and Cardinality standard one and pages 20-21 explore the Operations and Algebraic Thinking standard five. KS Assoc. of Teachers of Mathematics FLIPBOOK "Grade K" provides illustrated examples, instructional strategies, |
## Unit #4: Addition and Subtraction

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation (e.g. EL, SpEd, GATE)</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence of Learning Outcomes.</td>
<td>Outcomes.</td>
<td>Note: The standards in this shaded section will be taught for on-going concept development throughout this unit.</td>
<td>standards-based mathematics instructional programs.</td>
<td>differentiation for special populations – To be completed by district experts).</td>
<td>additional resources/tools and misconceptions by standard; pages 4-5 address the Counting and Cardinality standard one and pages 22 explore the Operations and Algebraic Thinking standard 5.</td>
</tr>
</tbody>
</table>

### Assessments for Learning

A. Count to 100 by ones and tens from any given number.

B. Fluently add and subtract within 5 knowing fact families or using mental strategies.

### Sequence for Learning Outcomes

*K.CC.1, *K.OA.5

### Strategies for Teaching and Learning

- Mentals:  
  - Doubles Plus One  
  - Commutative Property  
  - Facts that make five  
  - Doubles  
  - Count back by 1s and 2s  
  - Decompose a number leading to 5
## Unit #4: Addition and Subtraction

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g.</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that and are therefore connected to the Sequence of Learning Outcomes.</td>
<td>Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning Outcomes. Note: These assessments are suggested, not required.</td>
<td>Sequence of Learning Outcomes K.OA.1, K.OA.2, K.OA.3, K.OA.4, K.OA.5</td>
<td>Note: The focus of this unit is to help students understand the concept of addition and subtraction rather than reading and solving addition and subtraction number sentences/equations (KATM K Flipbook, 2012).</td>
<td>Differentiation Support for Unit: Use of math journals for differentiation and formative assessment (use link below) <a href="https://www.teachingchannel.org/videos/math-journals">https://www.teachingchannel.org/videos/math-journals</a></td>
<td>CCSS Support for Unit: Progressions for the Common Core State Standards in Mathematics, pages 6-11 address Operations and Algebraic Thinking domain. CA Mathematics Framework &quot;Grade K&quot;, pages 6-7 address the Counting and Cardinality standard one and pages 15-22 explore the Operations and Algebraic Thinking standard five. KS Assoc. of Teachers of Mathematics FLIPBOOK &quot;Grade K&quot; provides illustrated examples, instructional strategies, additional resources/tools and misconceptions by standard; pages 14-21 explore the Operations and Algebraic Thinking standard 5.</td>
</tr>
</tbody>
</table>

General Strategy Support for Unit: From the CA Mathematics Framework
- "Instructional Strategies" chapter provides research-based strategies for teaching math, K-12.
- "Supporting High Quality Common Core Instruction" chapter addresses the development, implementation, and maintenance of high-quality, standards-based mathematics instructional programs.

Differentiation Support for Unit: Use of math journals for differentiation and formative assessment (use link below) [https://www.teachingchannel.org/videos/math-journals](https://www.teachingchannel.org/videos/math-journals)

Flexible grouping:
- Content
- Interest
- Project/product
- Level (Heterogeneous/Homogeneous)

Tiered:
- Independent Management Plan (Must Do/May Do)
  - Grouping
    - Content
    - Rigor w/in the concept
    - Project-based learning
## Unit #4: Addition and Subtraction

### Essential Questions
- How would using objects and drawings help solve addition and subtraction word problems?
- How are addition and subtraction related?
- How can you check to see if your total is correct?
- What happens when groups of objects are joined?
- What happens when groups of objects are separated?
- Why do we use mathematical symbols?

### Assessments for Learning

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Represent addition and subtraction with objects, drawing, or acting out situations, with verbal explanations, expressions, or equations, up to 5.</td>
</tr>
<tr>
<td>2.</td>
<td>Decompose numbers with sums and differences less than or equal to 5.</td>
</tr>
</tbody>
</table>

### Assessment for Learning

| K.OA.1, K.OA.2, K.OA.3, K.OA.4, K.OA.5 |

### Strategies for Teaching and Learning

- Students may have difficulty seeing ten things as one unit, and saying ten to represent ten things.
- When first introducing addition, teacher provides contextual situations.
- Teacher uses a connecting word such as and to refer to two sets of objects being joined, and asking “how many” (e.g. 2 apples and 3 more apples make a total of 5 apples; move into $2 + 3 = 5$ apples).
- Students learn that addition is putting together and adding to, and subtraction is taking apart and taking from.
- Students use objects or math drawings to model word problems.
- Strategies:
  - Direct modeling by counting all or taking away
  - Dot Cards
  - Five-frame and ten-frames
  - Rekenrek
  - Counting on
  - Counting back
  - Fact families
  - Number bond

### Differentiation e.g. EL, SpEd, GATE

- Homework
- Grouping
- Formative Assessment
- Anchor Activities:
  - Content-related tasks for early finishers
  - Game
  - Investigation
  - Partner Activity
  - Stations

### Resources

- **enVision, Topic 7: Understanding Addition**
  - 7-1 “Stories About Joining”
  - 7-2 “More Joining”
  - 7-3 “Joining Groups”

- **enVision, Topic 8: Understanding Subtraction**
  - 8-1 “Stories About Separating”
  - 8-2 “Stories About Take Away”

### How does the order of addends (“partners”) affect the total?

- **A Visit to the Farm**, MAC Assessment Task, from Silicon Valley Mathematics Initiative
<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g.</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>How would using objects and drawings help solve addition and subtraction word problems?</td>
<td>Bird Watching, task from Silicon Valley Mathematics Initiative (Administered whole-group) Going Bananas, addition to 10; from Georgia Department of Education</td>
<td>K.OA.1, K.OA.2, K.OA.3, K.OA.4, K.OA.5</td>
<td>Represent addition and subtraction with objects, drawing, or acting out situations, with verbal explanations, expressions, or equations, up to 10. * Students use fingers or objects such as connecting cubes and counting bears to act out addition and subtraction situations, sing organizers such as ten-frame, part-part-whole work mat, etc.</td>
<td>EL, SpEd, GATE</td>
<td>enVision, Topic 8: Understanding Subtraction 8-3 “Problem Solving: Act It Out”</td>
</tr>
<tr>
<td>What is the difference between addition and subtraction?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How does the order of addends (“partners”) affect the total?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What happens when groups of objects are joined?</td>
<td>Shake and Spill Addition, from Georgia Department of Education Shake and Spill Subtraction, from Georgia Department of Education The Park, MAC Assessment Task, from Silicon Valley Mathematics Initiative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why do we use mathematical symbols?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Represent addition and subtraction with objects, drawing, or acting out situations, with verbal explanations, expressions, or equations, up to 10. * K.OA.1</td>
<td>Students use fingers or objects such as connecting cubes and counting bears to act out addition and subtraction situations, sing organizers such as ten-frame, part-part-whole work mat, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Decompose numbers with sums and differences less than or equal to 10. K.OA.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Solve simple addition and subtraction situations (story problems) by counting concrete objects (students can add within 10 to solve these problem types: add to, taken from, and put together/take apart). K.OA.2</td>
<td>Students use fingers or objects such as connecting cubes and counting bears to act out addition and subtraction situations, using organizers such as ten-frame, part-part-whole work mat, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Unit #4: Addition and Subtraction

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes K.OA.1, K.OA.2, K.OA.3, K.OA.4, K.OA.5</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can I use different combinations of numbers to represent the same quantity?</td>
<td></td>
<td>6. Decompose numbers less than or equal to 10 into pairs in more than one way, using objects or drawings, and record their work with drawings or equations.</td>
<td>Quick Images: Visualizing Number Combinations, video of a kindergarten lesson, from Teaching Channel; lesson objective: using quick images to identify combinations of 8</td>
<td>K.OA.3</td>
<td>enVision, Topic 9: More Addition and Subtraction 9-3 “Making 6 and 7” 9-4 “Writing Number Sentences for 6 and 7” 9-5 “Making 8 and 9” 9-6 “Writing Number Sentences for 8 and 9”</td>
</tr>
<tr>
<td>7. Make 10 when starting from any number 1-9 (e.g. when given 4 objects, students can count out 6 more objects to make a total of 10 objects).</td>
<td></td>
<td>Popsicle Stick Math: Making 10, a video from Teaching Channel; lesson objective: learning about combinations of 10 by counting popsicle sticks</td>
<td>K.OA.4</td>
<td>enVision, Topic 7: More Addition and Subtraction 9-7 “Making 10” 9-8 “Writing Number Sentences for 10”</td>
<td></td>
</tr>
<tr>
<td>How Many Dots? Cards F-I, from Silicon Valley Mathematics Initiative (administered whole-group, small-group, one-on-one)</td>
<td></td>
<td>8. Fluently add and subtract within 5 knowing fact families or using mental strategies.</td>
<td>Students use fingers to keep track of addends (“partners”)/ subtrahends, parts of addends/subtrahends. Students use number bonds to make combinations adding up to five. Students write expressions and equations using symbols +, -, and =, as well as addition words (add, join, put together, plus, combine, total) and subtraction words (minus, take away, separate, difference, compare).</td>
<td>K.OA.5</td>
<td>enVision, Topic 7: Understanding Addition 7-6 “Addition Sentences” enVision, Topic 8: Subtraction Sentences 8-6 “Subtraction Sentences”</td>
</tr>
</tbody>
</table>
**Unit #5: Understanding Numbers 11-19**

(Approx. # Days - )

Content Standards: K.NBT.1, K.CC.3, K.CC.6, and K.CC.7 (See Sequence for Learning Outcomes 1-8)

In this unit, students will understand the composition and decomposition of numbers 11-19.

*K.CC.1 and *K.OA.5 (Standards will be taught on a daily basis throughout this unit. See Sequence of Learning Outcomes A-B)

In these standards, students will count to 100 and fluently add and subtract within five.

### Common Core State Standards-Mathematics:

**Numbers and Operations in Base Ten ** \( K.NBT \)

Work with numbers 11–19 to gain foundations for place value.

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.

**Counting and Cardinality ** \( K.CC \)

Know number names and the count sequence.

1. * Count to 100 by ones and by tens.

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).

**Compare numbers**

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.

7. Compare two numbers between 1 and 10 presented as written numerals.

**Operations and Algebraic Thinking ** \( K.OA \)

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

5. * Fluently add and subtract within 5.

### Standards for Mathematical Practice:

| SMP.1 Make sense of problems and persevere in solving them. |
| SMP.2 Reason abstractly and quantitatively. |
| SMP.3 Construct viable arguments and critique the reasoning of others. |
| SMP.7 Look for and make use of structure. |

### SEL Competencies:

- Self-awareness
- Self-management
- Social awareness
- Relationship skills
- Responsible decision making
**ELD Standards to Support Unit:**

**Part I: Interacting in Meaningful Ways:**
- **Collaborative:**
  1. Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics.
  2. Interacting with others in written English in various communicative forms.
  3. Offering and supporting opinions and negotiating with others in communicative exchanges.

**Part II: Learning About How English Works**
- **Structuring Cohesive Texts**
  1. Understanding text structure.
- **Expanding and Enriching Ideas**
  5. Modifying to add details.
- **Connecting and Condensing Ideas**

### Unit #5: Understanding Numbers 11-19

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes K.CC.1, K.OA.5</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Essential Questions are thought-provoking, open-ended questions to be used within daily | Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to | Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session. | General Strategy Support for Unit: From the CA Mathematics Framework
- “Supporting High Quality Common Core” | Differentiation, e.g. EL, SpEd, GATE
- An illustrative list of high-leverage strategies to meet the needs of all | CCSS Support for Unit
CA Mathematics Framework “Grade K”, pages 6-7 address the Counting and Cardinality standard one and pages 20-21 explore the Operations and Algebraic Thinking standard five.
KS Assoc. of Teachers of Mathematics FLIPBOOK |

---

**Essential Questions**
- Assessments for Learning
- Sequence of Learning Outcomes K.CC.1, K.OA.5
- Strategies for Teaching and Learning
- Differentiation e.g. EL, SpEd, GATE
- Resources
## Unit #5: Understanding Numbers 11-19

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence of Learning Outcomes K.CC.1, K.OA.5</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation e.g. EL, SpEd, GATE)</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>lessons that and are therefore connected to the Sequence of Learning Outcomes.</td>
<td>inform instruction connected to the Sequence of Learning Outcomes. Note: These assessments are suggested, not required.</td>
<td>Each Outcome begins with Students will be able to... Note: The standards in this shaded section will be taught for on-going concept development throughout this unit.</td>
<td>Core instruction chapter addresses the development, implementation, and maintenance of high-quality, standards-based mathematics instructional programs.</td>
<td>students. Strategies for differentiation for special populations – To be completed by district experts.</td>
<td>&quot;Grade K&quot; provides illustrated examples, instructional strategies, additional resources/tools and misconceptions by standard; pages 4-5 address the Counting and Cardinality standard one and pages 22 explore the Operations and Algebraic Thinking standard 5.</td>
</tr>
</tbody>
</table>

### A. Count to 100 by ones and tens from any given number.

- Bundle objects such as straws, linking cubes, popsicle sticks, etc. into groups of ten.

### B. Fluently add and subtract within 5 knowing fact families or using mental strategies.

- Mental strategies:
  - Doubles Plus One
  - Commutative Property
  - Facts that make five
  - Doubles
  - Count back by 1s and 2s
  - Decompose a number leading to 5

- "Grade K" provides illustrated examples, instructional strategies, additional resources/tools and misconceptions by standard; pages 4-5 address the Counting and Cardinality standard one and pages 22 explore the Operations and Algebraic Thinking standard 5.
## Unit #5: Understanding Numbers 11-19

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation (e.g., EL/SpEd/GATE)</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Questions are thought-provoking, open-ended questions to be used within daily lessons that and are therefore connected to the Sequence of Learning Outcomes.</td>
<td>Assessments for Learning address Diagnostic, Formative, and Summative assessments used throughout the unit to inform instruction connected to the Sequence of Learning Outcomes. Note: These assessments are suggested, not required.</td>
<td>Sequence of Learning Outcomes is intentionally organized for student success. Each outcome is not necessarily intended to be taught within one class session. Each Outcome begins with Students will be able to...</td>
<td>General Strategy Support for Unit: From the CA Mathematics Framework • “Instructional Strategies” chapter provides research-based strategies for teaching math, K-12. • “Supporting High Quality Common Core Instruction” chapter addresses the development, implementation, and maintenance of high-quality, standards-based mathematics instructional programs.</td>
<td>Differentiation Support for Unit: Use of math journals for differentiation and formative assessment (use link below) Math Journals: A Record for Students and Teachers, lesson from Teaching Channel; lesson objective: recording thinking in individual journals Flexible grouping: • Content • Interest • Project/product • Level (Heterogeneous/Homogeneous) Tiered: • Independent Management Plan (Must Do/ May Do) • Grouping o Content o Rigor w/in the concept o Project-based learning o Homework</td>
<td>CSS Support for Unit CA Mathematics Framework &quot;Grade K&quot; pp. 29-35, explores the address Geometry domain. KS Assoc. of Teachers of Mathematics FLIPBOOK &quot;Grade K&quot; provides illustrated examples, instructional strategies, additional resources/tools and misconceptions by standard. Pages 29-39 address Geometry domain.</td>
</tr>
<tr>
<td>Why do we break numbers apart into ten and some more ones? How do you know the numbers 11-19 are composed of tens ones and some more ones? What patterns do you see when composing teen numbers?</td>
<td>Matching Numbers 11-19, crossing out numbers that do not match the top card</td>
<td>1. Describe, read, write, explore, and explain how the counting numbers from 11-19 are composed of tens ones and some more ones.</td>
<td>Students use one-to-one correspondence and use those objects to compose one group of ten and additional ones. Teacher ask probing questions such as “How do you know?” to elicit student thinking and reasoning. Strategies for unitizing 11-19: • Rods and base ten blocks • Rekenrek • Linking cubes • Tens/Counting frames • Place value cards • Number bonds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Unit #5: Understanding Numbers 11-19

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation (e.g., EL/SpEd/GATE)</th>
<th>Resources</th>
</tr>
</thead>
</table>
| How does the position of a digit in a number affect its value? | Cupcakes, assessment task from Silicon Valley Mathematics Initiative (administered whole-group, small-group, or one-on-one) | **K.NBT.1, K.CC.3, K.CC.6, K.CC.7** | Fact families | o Grouping  
  o Formative Assessment | Anchor Activities:  
  ▪ Content-related Tasks for early finishers  
  o Game  
  o Investigation  
  o Partner Activity  
  o Stations | enVision, Topic 11: Decomposing Numbers 11-19  
 11-1 “Creating Sets to 19” |
| What strategy can you use to count efficiently from 11-19? | Count and Write, count and write the number of objects | **K.NBT.1, K.CC.7** | Skip Counting With Counting Collections, a video from Teaching Channel, lesson objective: recording strategies when skip counting by 5s and 10s | | enVision, Topic 11: Decomposing Numbers 11-19  
 11-2 “Parts of 11, 12, and 13”  
 11-3 “Parts of 14, 15, and 16” |
| How can I use drawings and objects to compose and separate numbers from 11-19? | Showing 11-19 with Manipulatives, make groups of tens using two tens-frames | **K.NBT.1** | Students connect the representation to the symbol (number) and recognize the written patterns in these numbers. | | enVision, Topic 10: Composing Numbers 11-19  
 10-4 “Problem-Solving: Look for a Pattern”  
 enVision, Topic 11: Decomposing Numbers 11-19  
 11-5 “Problem-Solving: Look for a Pattern” |
| | | **3. Count objects up to 19 and represent it with a written numeral.** | | | |
| | | **4. Use objects to compose one group of ten ones and additional ones.** | | | |
| | | **5. Use a variety of models to create a group of ten, and understand that a group of ten is considered one unit and can be represented by a single word** | | | |
| | | **Students use “counting on” as a strategy to count objects from 11-19. Students use objects such as bundles of ten straws to create a common representation for ten.** | | | |
### Unit #5: Understanding Numbers 11-19

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Assessments for Learning</th>
<th>Sequence for Learning Outcomes</th>
<th>Strategies for Teaching and Learning</th>
<th>Differentiation (e.g., EL/SpEd/GATE)</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>What patterns do you see when composing teen numbers?</td>
<td>K.NBT.1, K.CC.3, K.CC.6, K.CC.7</td>
<td>K.NBT.1</td>
<td>Students estimate before counting to determine how many more ones there are after making ten. <strong>Grade K Math: Counting</strong>, a video of students using mats and diagrams to organize their thinking about numbers bigger than 10; from engageny</td>
<td>Sum-monet 10s, from Georgia Department of Education</td>
<td><strong>enVision</strong>, Topic 11: Decomposing Numbers 11-19 11-4 “Parts of 17, 18, 19”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Students use beads, beans, teddy bear counters, tiles, cubes, etc. to group and count objects. Students use unitizing concepts to sort objects using benchmark numbers of five and ten. Students use “friendly” numbers to make combinations that make counting easier and systematic. Students may use work-mats or different colored squares to help them organize counting collections. Count objects in the classroom; e.g., count the number of chairs of the students who are absent, count the number of windows, shoes, triangles, circles, etc. (Framework, p7)</td>
<td></td>
<td>Beyond Fingers: Place Value &amp; the Numbers 11-19, a video from <strong>Teaching Channel</strong>; lesson objective: understanding the numbers 11-19 as 10 ones and some further ones</td>
</tr>
<tr>
<td>7. Find different ways to group objects from 11-19 that will make counting easier.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Essential Questions</td>
<td>Assessments for Learning</td>
<td>Sequence for Learning Outcomes</td>
<td>Strategies for Teaching and Learning</td>
<td>Differentiation (e.g., EL/SpEd/GATE)</td>
<td>Resources</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------</td>
<td>--------------------------------</td>
<td>-------------------------------------</td>
<td>--------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>8. Students will practice using academic language that describe quantities such as: sixteen as one ten and six, a rod and six cubes, a bundle and six. K.NBT.1</td>
<td></td>
<td>K.NBT.1, K.CC.3, K.CC.6, K.CC.7</td>
<td>Use tens-frames, number-bond diagrams, and layered place value cards to reinforce the academic language.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>