## Kindergarten Math Curriculum

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</tr>
</tbody>
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Topic 2: Compare Numbers 0 to 5  
Topic 3: Numbers 6 to 10  
Topic 4: Compare Numbers 0 to 10 |
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Unit 0: Introduction

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Subject: Math  
Grade: Kindergarten  
Name of Unit: Introduction  
Length of Unit: 3 days

Overview of Unit: The first week of school is focused on setting up the classroom culture for the year and developing routines that support the development of the Standards for Mathematical Practice. Teachers will get to know their students as the students get to know themselves as math learners.

Getting Ready for the Unit:  
- Prepare a monthly calendar that includes yesterday, today and tomorrow  
- Have a way to track number of days in school by ones, tens and hundreds  
- Create a blank number line (from sentence strips or something similar) with 20 boxes  
- Start a number line to 100 or use a hundred chart to represent days to 100  
- Make an anchor chart for Tools/Toys:  
  https://docs.google.com/document/d/1OvDhITDcfDP9y4qQD2ARfyjolpHyuGaqFcC_dQE/edit  
- Strips of paper, 1 per student cut in pairs to various lengths. For example, for 22 students, cut 2 each of 11 different lengths. Strip pairs should all be the same color but noticeably different in length.  
- 1 cardstock copy of full set, cut into individual cards for 22 students (if you have more than 22 students, you can print extra as needed)  
  https://docs.google.com/document/d/1fR_Hyo1ItJFddMPvkALT8G1xHxIxtivs2wyu_osIGE/edit  
- Prepare station manipulatives

Essential Questions:  
- How should we use math tools in the classroom?  
- How can we talk to others about our thinking?  
- How can we listen to others about their thinking?

Enduring Understandings:  
- Establish math classroom norms, such as these:  
  - Students learn routines and procedures.  
  - Students work toward being part of an equitable classroom community.  
  - Students gain familiarity with math manipulatives.  
  - Students begin to pay attention to using the language of math with precision.
Mathematical Practices:
- MP1 Make sense of problems and persevere in solving them
- MP2 Reason abstractly and quantitatively.
- MP3 Construct viable arguments and critique the reasoning of others.
- MP4 Model with mathematics.
- MP5 Use appropriate tools strategically.
- MP6 Attend to precision.
- MP7 Look for and make use of structure.
- MP8 Look for and express regularity in repeated reasoning.

**Daily Routines**

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

**Title:** Monthly Calendar  
**Objective:** To familiarize students with the structure and pattern of a calendar, and help students learn the names of the days of the week and the months of the year.  
**Description:**
- Set up a reusable calendar in a permanent place in the classroom.  
- Every day find the current day and have students read the day of the week, the month, the date number, and the year.  
- Help students become familiar with the days of the week and calendar language with a Days Board, i.e., Yesterday was ______. Today is ______. Tomorrow will be ______.

**Title:** Number of Days in School  
**Objective:** To build one-to-one correspondence and to lay the foundation for an understanding of place value.  
**Description:**
- Have ready a 3-pocket chart and sticks or straws to count. The pockets should be labeled “Ones (1), Tens (10), Hundreds (100).”  
- Each day add a stick or straw to the ones pocket. To regroup, band ten together and move to the tens pocket.  
- Each day, count all the sticks already in the pockets and add one more.

**Title:** Number Line to 20  
**Objective:** To establish the primacy of the numbers up to 20 for kindergarten  
**Description:**
- Set up a number line to 20 in a permanent place in the classroom. Number line may be completed on day one, or may be added to each day for the first 20 days. If the number line is constructed on day one, have the rectangles for the numbers ready without numbers. On day one add number 1, day two add 2, etc., until the line is complete at 20.  
- The number line can be drawn on a long piece of paper or a commercially available product.  
- Add a number each day.
Title: Growing number line to 100  
Objective: To practice the counting sequence to automaticity and begin to see the patterns of place value  
Description:
- Set up a number line to 100 in a permanent place in the classroom. On day one, add “1.”
- This number line will eventually become a hundreds chart. The number line may begin either as individual cards on the hundreds chart, as strips of numbers 1–10, 11–20, etc., or it may be a continuous line that builds to 100. On the 100th day, the line will be cut into 1–10 strips to create a hundreds chart.

Learning Station Bank

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

<table>
<thead>
<tr>
<th>Learning Station Descriptions</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Title:** Material Exploration  
**Objective:** Establish learning station routines and behaviors; allow students to play and become familiar with math materials; provide opportunities for teacher to assess beginning numeracy skills on the K.0-1 Observation Sheet.  
- Continue with material explorations until students exhibit appropriate behaviors and numeracy skills of all students have been assessed.  
- These Materials Exploration stations may be switched out with new stations one or two at a time as the unit progresses. | Linking cubes  
Pattern blocks  
Bear counters  
3-D shape blocks  
Paper and crayons or markers  
Number cards or tiles |

Engaging Experience 1

Teaching Point: Today I am going to teach you that manipulatives are tools we use to help us understand math.  
Suggested Length of Time: 1 day  
Detailed Description/Instructions:
**One way to do this** is to create a Tools/Toys anchor chart to reinforce behavior expectations with manipulatives. Show students various pictures from Toys/Tools Anchor Chart and ask them to determine if they are toys or tools. Ask students what makes that particular item a toy or a tool. Discuss how tools are used as compared to toys, for example, they should be used for the purpose intended; for counting when the lesson is about counting, for building when the lesson is about constructing shapes. After the lesson, place a basket of manipulatives on each table and let students explore what math they could do with that tool (counting, building shapes, patterns, sorting, comparing, measuring, etc.). After teaching lessons 2 and 3, students can explore manipulatives as their learning station for this unit.  
https://docs.google.com/document/d/10XOvqDhITDcfDP9y4qQD2ARfyjolpHyuGaqFcoC_dQE/edit
Engaging Experience 2

Teaching Point: Today I am going to teach you about our math classroom procedures and explore length.

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to gather students in a central location. Tell students they are going to use strips of paper to find a partner for today. Tell them that their partner will be the student whose strip of paper is the same length as theirs. Distribute strips to students. Remind them to walk when finding their partner. As the students use the strips to find their partner, they may make mistakes and find a partner whose paper strip is not the same length. Allow students to be wrong. Direct instruction will follow the activity. As students find their partners, have them sit down next to each other. When all the students have a partner, ask 5–6 pairs to stand up in turn and explain how they know they have the right partner. You may choose to have students with non-matching strips stand up first. Accept all answers. This is an opportunity to introduce the norm: Mistakes help us grow. (Math Norms Teacher) Collect strips. Math talk sentence possibilities:

- I think __ because __.
- I agree with __ because __.
- I disagree with __ because __.
- I know I have the right partner because __.

Engaging Experience 3

Teaching Point: Today I am going to teach you about our math classroom procedures and explore 2D shapes.

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to remind students of how they used strips of paper to find a partner yesterday and have them share what they learned. Tell them that today they are going to find a partner again, but this time their partner is the student who has a matching shape card. As the students use the shape cards to find their partner, they may match open circles with solid circles, small shapes with large shapes, etc. Allow students to determine what it means to be a match. Direct instruction will follow the activity. Distribute cards to students. Remind them to walk when finding their partner. As students find their partners, have them sit next to their partner on the rug. When all the students have a partner, ask 5–6 pairs to stand up in turn and explain how they know they have the right partner. As students share their explanations, prod students to explain how they know their shape cards match with questions such as How do you know these are matching cards? What is the same about the cards? Is there anything that is different? Does everyone agree? Collect shape cards.

https://docs.google.com/document/d/1fR_HyOol1ItJFddMPvkALT8G19HIxtivs2wyu_osIGE/edit

BOE Approved June 20, 2019
Subject: Math  
Grade: K  
Name of Unit: Counting and Cardinality Part 1  
Length of Unit: 42 Days  

Overview of Unit: In this unit, students will learn number names and the count sequence, count groups of objects and compare numbers.  

In Topic 1: Students develop a fundamental understanding of number names, the counting sequence, and written numerals.  
In Topic 2: Students compare numbers to 4 using matching and counting strategies.  
In Topic 3: Students extend their understanding of number names, the counting sequence, and written numerals to 10.  
In Topic 4: Students compare numbers to 10 using matching and counting strategies.  

Getting Ready for the Unit:  
- Daily Visual Schedule  
- 1 clear container  
- Unifix or connecting cubes  
- Prepare stations  
- Individual containers of counters for students  
- Paper bags (enough for half your class)  
- Number cards 0-10 (to show written numeral)  
- Ten-frames  

Assessment Options:  

<table>
<thead>
<tr>
<th>Formative Assessment Options</th>
<th>Summative Assessment Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</td>
<td>(Administered at the end of unit or topic to assess mastery of learning objectives.)</td>
</tr>
</tbody>
</table>
| - Topic Pretest  
- Quick Checks (Check marks within lesson)  
- One-on-One Conferring  
- Convince Me | - Topic Assessment Practice  
- Topic Performance Task  
- Online version  
- Cumulative/ Benchmark Assessment (print or online) |

Math Review:  
- Math Anytime  
  - Daily Review  
  - Today’s Challenge  
  - Fluency  
    - enVision 2020  
- Topic Opener: Review What You Know  
- Vocabulary Review  

BOE Approved June 20, 2019
Counting and Cardinality Routines (enVision 2020)

<table>
<thead>
<tr>
<th>Topic 1</th>
<th>Topic 2</th>
<th>Topic 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Counting Out</td>
<td>● How Many are Hiding?</td>
<td>● Five and More</td>
</tr>
<tr>
<td>● Cross the Line</td>
<td>● How Many are Standing</td>
<td>● Order-Up Race</td>
</tr>
<tr>
<td>● Empty Hundred Chart</td>
<td></td>
<td></td>
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<tr>
<td>● Jump the Dice</td>
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<td></td>
</tr>
<tr>
<td>● Listen, Look, and Show</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Make FIVE Wrists</td>
<td></td>
<td></td>
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<tr>
<td>● Number of the Day</td>
<td></td>
<td></td>
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<tr>
<td>● Ooh! And Aah! Counting</td>
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<td></td>
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<tr>
<td>● Silly Sam</td>
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<td></td>
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<tr>
<td>● Stick Counting</td>
<td></td>
<td></td>
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<tr>
<td>● Toss and Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● How Many are Hiding?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● How Many are Standing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Five and More</td>
<td></td>
<td></td>
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<tr>
<td>● Order-Up Race</td>
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</tr>
</tbody>
</table>

Number Routines: Topic 1 and Topic 2

Number Talk: Dot Images with Numbers 0-5

Dot image number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems or provides opportunities for students to reason with the same quantity from multiple perspectives. This provides an opportunity to informally assess whether the student is unitizing a specific amount and conserving number.

As each problem is shown, as students, “How many dots do you see? How do you see them?”

Number 3 examples:

<table>
<thead>
<tr>
<th>String 1</th>
<th>String 2</th>
<th>String 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="String 1" /></td>
<td><img src="image2" alt="String 2" /></td>
<td><img src="image3" alt="String 3" /></td>
</tr>
</tbody>
</table>

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

Number Talk: Five Frames with Numbers 3-5

Five- and ten-frame number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems.

The focus for numbers 3-9 is to ask students, “How many dots do you see? How do you see them?”
Number Routines: Topic 3 and Topic 4

Number Talk: Dot Images with Numbers 6-10

Dot image number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems or provides opportunities for students to reason with the same quantity from multiple perspectives. This provides an opportunity to informally assess whether the student is unitizing a specific amount and conserving number.

As each problem is shown, as students, “How many dots do you see? How do you see them?”

Number Talk: Five- and Ten-Frames with Numbers 6-10

Five- and ten-frame number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems.

The focus for numbers 3-9 is to ask students, “How many dots do you see? How do you see them?” With frames for the number 10, the question shifts to, “How many more to make ten?”
Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

### Additional Personalized Practice and Application Suggestions:

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Reteach to Build Understanding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Intervention Activity</td>
<td>● Build Mathematical Fluency</td>
<td>● Enrichment</td>
</tr>
<tr>
<td>● Additional Practice</td>
<td>● Additional Practice</td>
<td>● Pick a Project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● enVision STEM Activity</td>
</tr>
</tbody>
</table>

### Daily Routines

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

**Continued Daily Routines:** Monthly Calendar, Number of Days in School, Number Line to 20, Growing Number Line to 100

**New Routine:** Introduce this routine on the first day of the new unit.

**Title:** Daily Schedule  
**Objective:** Introduce students to the ordinal words (first, second, etc.) and their usage.  
**Description:** Use the Schedule Activity Cards BLM S C to set up a system for students to know the order of events for the day. Times are not required or expected. Each day, discuss what activity students will do first, second, etc., as well as other order words such as before, after, later, etc.

**New Routine:** Introduce this routine near the beginning of the new unit.

**Title:** Container Estimation - number of objects  
**Objective:** Begin to use conservation of number skills (the ability to determine that a set of objects will remain the same despite changes to the container or size of objects) to estimate quantities.  
**Description:** Select a clear container (a rectangular prism is preferred but not required) and add a quantity of linking cubes. Once or twice a week, show the students the container and have them estimate the number of cubes inside. Keep the same container and type of cubes each time, but change the quantity of the cubes. After students have had a chance to guess the number of cubes, empty the container and count the cubes back into it with the students. Ask the students to
describe what the cubes look like in the container. For example, students might respond, *10 cubes take up half the container* or *3 cubes look like just a few cubes on the bottom of the container*, etc.

### Learning Station Bank

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

<table>
<thead>
<tr>
<th>Learning Station Descriptions</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title:</strong> Number Writing</td>
<td></td>
</tr>
<tr>
<td><strong>Objective:</strong> Practice writing numerals</td>
<td></td>
</tr>
<tr>
<td>● Cut the Writing Numbers Example BLM into strips of individual numbers. The strips may be glued to the top of lined paper and laminated for reuse, or left for single use.</td>
<td></td>
</tr>
<tr>
<td>● Choose a material for students to use and have students practice writing their numerals. Your choice may depend on the students’ interest level, ability to use alternative materials, or your need for a record.</td>
<td></td>
</tr>
<tr>
<td><strong>Resources:</strong> Writing Numbers Example BLM S C</td>
<td></td>
</tr>
<tr>
<td>Whiteboards, sand trays, shaving cream, Play-Doh, paper and pencils, or crayons</td>
<td></td>
</tr>
<tr>
<td><strong>Title:</strong> Number Match</td>
<td></td>
</tr>
<tr>
<td><strong>Objective:</strong> Recognize numerals and count out that number of objects</td>
<td></td>
</tr>
<tr>
<td>● You may wish start the station with number cards 0–5 and repeat it with the number cards 6–10 or 0–10.</td>
<td></td>
</tr>
<tr>
<td>● Have enough small number card sets for each pair of students at the station plus enough counters to make the numbers. Choose the card set that best meets the needs of your students.</td>
<td></td>
</tr>
<tr>
<td>● Have students shuffle the cards. The first partner take the top card.</td>
<td></td>
</tr>
<tr>
<td>● The second student makes the number shown with the counters and the first student confirms.</td>
<td></td>
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<tr>
<td>● If using linking cubes, students may make a tower to represent the number.</td>
<td></td>
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<tr>
<td>● Then students switch roles and continue.</td>
<td></td>
</tr>
<tr>
<td><strong>Resources:</strong> Small Number Cards BLM or Number Quantity Cards BLM</td>
<td></td>
</tr>
<tr>
<td>Counters or linking cubes</td>
<td></td>
</tr>
<tr>
<td><strong>Title:</strong> Number Puzzles</td>
<td></td>
</tr>
<tr>
<td><strong>Objective:</strong> Recognize numerals and match multiple representations of the number</td>
<td></td>
</tr>
<tr>
<td>● You may wish start the station with 0–5 number puzzles and repeat it with 6–10 number puzzles.</td>
<td></td>
</tr>
<tr>
<td>● Lay out number puzzle pieces in random order.</td>
<td></td>
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<tr>
<td>● Have students match the puzzle pieces that represent the same number.</td>
<td></td>
</tr>
<tr>
<td>● Students should work in pairs to allow for correction and support.</td>
<td></td>
</tr>
<tr>
<td><strong>Resources:</strong> Puzzle pieces for the numbers 0–5 and/or 6–10</td>
<td></td>
</tr>
</tbody>
</table>
Title: 2-D Pattern Block Puzzles - Numbers from Zero to Ten

Objective: Practice recognizing and building the shapes of numbers 0-10.
● Have Pattern Block pictures and Pattern Blocks available for students to use.
● Allow students to choose the picture they would like to recreate with the Pattern Blocks. Challenge students to see if they can use different Pattern Blocks to create the same picture.

Credit: Pattern Block Puzzles used with permission from Jessica’s Corner of Cyberspace, http://raebear.net/goodies/patternblocks/edu.html

Topic 1: Numbers 0-5
Students develop a fundamental understanding of number names, the counting sequence, and written numerals.

Essential Questions:
● How do you know how many objects are in a set? If the objects are rearranged, how many will there be then?
● How can numbers from zero to five be counted, read and written?

Enduring Understandings:
● Counting tells how many are in a set, regardless of their arrangement or the order in which they were counted.
● There is a unique symbol that goes with each number word.

Priority Standards:
● K.NS.A.4 Read and write numerals and represent a number of objects from 0 to 20.
● K.NS.B.8 Recognize, without counting, the quantity of groups up to 5 objects arranged in common patterns.

Supporting Standards:
● K.NS.B.5 Say the number names when counting objects, in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
● K.NS.B.6 Demonstrate that the last number name said tells the number of objects counted and the number of objects is the same regardless of their arrangement or the order in which they were counted.
● K.NS.B.9 Demonstrate that a number can be used to represent “how many” are in a set.
● K.NS.A.3 Count backward from a given number between 10 and 1.
● K.GM.B.4 Name the days of the week (Daily Routines)
● K.GM.B.3 Demonstrate an understanding of concepts of time and devices that measure time. (Daily Routines)
<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.NS.A.4</td>
<td>numerals</td>
<td>Read and write</td>
<td>Apply</td>
<td>1</td>
</tr>
<tr>
<td>K.NS.A.4</td>
<td>a number of objects from 0 to 20</td>
<td>Represent</td>
<td>Understand</td>
<td>1</td>
</tr>
<tr>
<td>K.NS.B.8</td>
<td>without counting, the quantity of groups up to 5 objects arranged in common patterns</td>
<td>Recognize</td>
<td>Remember</td>
<td>1</td>
</tr>
</tbody>
</table>

**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>represent</td>
<td>Numeral, number, counting</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** *Today I’m going to teach you* that you can count 1, 2, and 3 objects by using counters and recording your answer.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.NS.A.4

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 1-1 to teach that counting tells how many are in a group, regardless of their arrangement or the order in which they were counted. The last number said when counting a group is the total. Counting is cumulative.

**Bloom’s Levels:** Apply/Understand

**Webb’s DOK:** 1

**Engaging Experience 2**

**Teaching Point:** *Today I’m going to teach you* that you can count groups of 1, 2, and 3 objects by recognizing that they can be shown in different ways.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.NS.B.8

**Detailed Description/Instructions:**

- **One way to do this** to use lesson 1-2 to teach that counting tells how many are in a group, regardless of their arrangement or the order in which they were counted. The last number said when counting a group is the total. Counting is cumulative.

**Bloom’s Levels:** Remember

**Webb’s DOK:** 1

**Engaging Experience 3**

**Teaching Point:** *Today I’m going to teach you* that you can read and write the numbers 1, 2,
and 3 by using a unique symbol for each number word.

Suggested Length of Time: 1 day

Standards Addressed

Priority: K.NS.A.4

Detailed Description/Instructions:

☐ One way to do this is to use lesson 1-3 to teach that there is a unique symbol that goes with each number word.

Bloom’s Levels: Apply/Understand
Webb’s DOK: 1

Engaging Experience 4

Teaching Point: Today I’m going to teach you that you can count 4 and 5 objects by using manipulatives and recording your answer.

Suggested Length of Time: 1 day

Standards Addressed

Priority: K.NS.A.4

Detailed Description/Instructions:

☐ One way to do this is to use lesson 1-4 to teach that counting tells how many are in a group, regardless of their arrangement or the order in which they were counted. The last number said when counting a group is the total. Counting is cumulative.

Bloom’s Levels: Apply/Understand
Webb’s DOK: 1

Engaging Experience 5

Teaching Point: Today I’m going to teach you that you can count groups of 4 and 5 objects by recognizing that they can be shown in different ways.

Suggested Length of Time: 1 day

Standards Addressed

Priority: K.NS.B.8

Detailed Description/Instructions:

☐ One way to do this is to use lesson 1-5 to teach that counting tells how many are in a group, regardless of their arrangement or the order in which they were counted. The last number said when counting a group is the total. Counting is cumulative.

Bloom’s Levels: Remember
Webb’s DOK: 1

Engaging Experience 6

Teaching Point: Today I’m going to teach you that you can read and write the numbers 4 and 5 by using a unique symbol for each number word.

Suggested Length of Time: 1 day

Standards Addressed

Priority: K.NS.A.4

Detailed Description/Instructions:

☐ One way to do this is to use lesson 1-6 to teach that there is a unique symbol that goes with each number word.

Bloom’s Levels: Apply/Understand

BOE Approved June 20, 2019
Engaging Experience 7
Teaching Point: Today I’m going to teach you that you can use the number zero to tell when there are no objects by representing an empty quantity (none) with the number zero.

Suggested Length of Time: 1 day

Standards Addressed
Priority: K.NS.A.4

Detailed Description/Instructions:
- One way to do this is to use lesson 1-7 to teach that zero is a number that tells how many objects there are when there are none.

Bloom’s Levels: Apply/Understand
Webb’s DOK: 1

Engaging Experience 8
Teaching Point: Today I’m going to teach you that you can read and write the number 0 by using a unique symbol for the number word.

Suggested Length of Time: 1 day

Standards Addressed
Priority: K.NS.A.4

Detailed Description/Instructions:
- One way to do this is to use lesson 1-8 to teach that there is a unique symbol that goes with the number word to show when there are no objects.

Bloom’s Levels: Apply/Understand
Webb’s DOK: 1

Engaging Experience 9
Teaching Point: Today I’m going to teach you that you count and write up to the number 5 by using pictures, objects and number order knowledge.

Suggested Length of Time: 1 day

Standards Addressed
Priority: K.NS.A.4

Detailed Description/Instructions:
- One way to do this is to use lesson 1-9 to teach that there is a specific order to the set of whole numbers.

Bloom’s Levels: Apply/Understand
Webb’s DOK: 1

Engaging Experience 10
Teaching Point: Today I’m going to teach you that you can explain what you know about counting using objects, words or another method to explain your thinking.

Suggested Length of Time: 1 day

Standards Addressed
Priority: K.NS.A.4

Detailed Description/Instructions:
- One way to do this is to use lesson 1-10 to teach that good math thinkers use math to
explain why they are right. They can talk about the math that others do, too.

**Bloom’s Levels: Apply/Understand**

**Webb’s DOK: 1**

### Engaging Scenario - Topic 1

**3- ACT Math: Set the Table - page 4**

In the 3-Act Math for Topic 1, students draw on their conceptual understanding of counting, reading, and writing to 5. They make use of representations and tools such as *pictures, verbal counting, and written numbers.*

### Topic 2: Compare Numbers 0 to 5

Students compare numbers to 5 using matching and counting strategies.

**Essential Questions:**

- How can numbers from 0 to 5 be compared and ordered?

**Enduring Understandings:**

- If you compare two groups of objects and the number of objects match, the groups have an equal (same) number of objects. If one group has items left over, that group has more. The other group has less (fewer) objects.

**Priority Standards for unit:**

- [K.NS.C.10](#) Compare two or more sets of objects and identify which set is equal to, more than or less than the other.
- [K.NS.A.4](#) Read and write numerals and represent a number of objects from 0 to 20.

**Supporting Standards for unit:**

- [K.NS.B.5](#) Say the number names when counting objects, in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- [K.NS.B.6](#) Demonstrate that the last number name said tells the number of objects counted and the number of objects is the same regardless of their arrangement or the order in which they were counted.
- [K.NS.B.7](#) Demonstrate that each successive number name refers to a quantity that is one larger than the previous number.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.NS.C.10</td>
<td>two or more sets of objects</td>
<td>compare</td>
<td>Understand</td>
<td>1</td>
</tr>
<tr>
<td>K.NS.C.10</td>
<td>which set is equal to, more than or less than the other</td>
<td>identify</td>
<td>Remember</td>
<td>1</td>
</tr>
</tbody>
</table>

BOE Approved June 20, 2019
Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>identify</td>
<td>equal to</td>
</tr>
<tr>
<td>compare</td>
<td>more than</td>
</tr>
<tr>
<td></td>
<td>less than</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** *Today I want to teach you* that you can compare groups to see whether they are equal by matching.

**Suggested Length of Time:** 1 day

**Standards Addressed**
- Priority: K.NS.C.10

**Detailed Description/Instruction:**
- One way to do this is to use lesson 2-1 to teach that two groups of objects are equal in number if they can be directly matched, one-to-one, with no extras in either group.

**Bloom’s Levels:** Understand/Remember

**Webb’s DOK:** 1

**Engaging Experience 2**

**Teaching Point:** *Today I want to teach you* that you can tell whether one group is greater in number than another group by drawing lines and matching them up.

**Suggested Length of Time:** 1 day

**Standards Addressed**
- Priority: K.NS.C.10

**Detailed Description/Instruction:**
- One way to do this is to use lesson 2-2 to teach that two groups of objects can be directly compared using a matching process.

**Bloom’s Levels:** Understand/Remember

**Webb’s DOK:** 1

**Engaging Experience 3**

**Teaching Point:** *Today I want to teach you* that you can tell whether one group is less in number than another group by drawing lines and matching them up.

**Suggested Length of Time:** 1 day

**Standards Addressed**
- Priority: K.NS.C.10

**Detailed Description/Instruction:**
- One way to do this is to use lesson 2-3 to teach that two groups of objects can be directly compared using a matching process.

**Bloom’s Levels:** Understand/Remember

**Webb’s DOK:** 1

**Engaging Experience 4**

**Teaching Point:** *Today I want to teach you* that you can compare numbers by counting the...
number of objects in a group, writing the total number and using words like greater than and less than.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.NS.C.10

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 2-4 to teach that two sets of objects can be compared by number using counting strategies, which is a more efficient method than matching.

**Bloom’s Levels:** Understand/Remember

**Webb’s DOK:** 1

**Engaging Experience 5**

**Teaching Point:** *Today I want to teach you* that you can compare numbers by using objects, drawings, and numbers.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.NS.C.10

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 2-5 to teach that good math thinkers use math they know to show and solve problems.

**Bloom’s Levels:** Understand/Remember

**Webb’s DOK:** 1

---

**Topic 3: Numbers 6 to 10**

Students extend their understanding of number names, the counting sequence, and written numerals to 10.

**Essential Questions:**

- How can numbers from 6 to 10 be counted, read and written?

**Enduring Understandings:**

- Counting tells how many are in a set, regardless of their arrangement or the order in which they were counted.
- There is a unique symbol that goes with each number word.

**Priority Standards for unit:**

- K.NS.A.4 Read and write numerals and represent a number of objects from 0 to 20.
- K.NS.B.8 Recognize, without counting, the quantity of groups up to 5 objects arranged in common patterns.

**Supporting Standards for unit:**

- K.NS.B.6 Demonstrate that the last number name said tells the number of objects counted and the number of objects is the same regardless of their arrangement or the order in which they were counted.
- K.NS.B.7 Demonstrate that each successive number name refers to a quantity that is one larger than the previous number.

BOE Approved June 20, 2019
<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.NS.A.4</td>
<td>numerals</td>
<td>Read and write</td>
<td>Apply</td>
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</tr>
<tr>
<td>K.NS.A.4</td>
<td>a number of objects from 0 to 20</td>
<td>Represent</td>
<td>Understand</td>
<td>1</td>
</tr>
<tr>
<td>K.NS.B.8</td>
<td>without counting, the quantity of groups up to 5 objects arranged in common patterns</td>
<td>Recognize</td>
<td>Remember</td>
<td>1</td>
</tr>
</tbody>
</table>

**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>represent</td>
<td>numeral</td>
</tr>
<tr>
<td></td>
<td>number</td>
</tr>
<tr>
<td></td>
<td>counting</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** *Today I’m going to teach you* that you can count 6 and 7 objects by using counters and recording your answer.

**Suggested Length of Time:** 1 day

**Standards Addressed**

Priority: K.NS.A.4

**Detailed Description/Instructions:**

☐ **One way to do this** is to use lesson 3-1 to teach that counting tells how many are in a set, or group, no matter which order the objects are counted. The last number said when counting a group is the total. Counting is cumulative.

**Bloom’s Levels:** Apply/Understand

Webb’s DOK: 1

**Engaging Experience 2**

**Teaching Point:** *Today I’m going to teach you* that you can read and write the numbers 6 and 7 by using a unique symbol for each number word.

**Suggested Length of Time:** 1 day

**Standards Addressed**

Priority: K.NS.A.4

**Detailed Description/Instructions:**

☐ **One way to do this** use lesson 3-2 to teach that there is more than one way to show a number. There is a unique symbol that goes with each number word.
Engaging Experience 3
Teaching Point: Today I’m going to teach you that you can count 8 and 9 objects by using counters and recording your answer.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.NS.A.4
Detailed Description/Instructions:
  □ One way to do this to use lesson 3-3 to teach that counting tells how many are in a set, or group, no matter which order the objects are counted. The last number said when counting a group is the total. Counting is cumulative.

Engaging Experience 4
Teaching Point: Today I’m going to teach you that you can read and write the numbers 8 and 9 by using a unique symbol for each number word.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.NS.A.4
Detailed Description/Instructions:
  □ One way to do this is to use lesson 3-4 to teach that there is more than one way to show a number. There is a unique symbol that goes with each number word.

Engaging Experience 5
Teaching Point: Today I’m going to teach you that you can count 10 objects by using counters and recording your answer.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.NS.A.4
Detailed Description/Instructions:
  □ One way to do this is to use lesson 3-5 to teach that counting tells how many are in a set, or group, no matter which order the objects are counted. The last number said when counting a group is the total. Counting is cumulative.

Engaging Experience 6
Teaching Point: Today I’m going to teach you that you can read and write the number 10 by using a unique symbol for each number word.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.NS.A.4
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Detailed Description/Instructions:
- **One way to do this** to use lesson 3-6 to teach that there is more than one way to show a number. There is a unique symbol that goes with each number word.

**Bloom’s Levels: Apply/Understand**
**Webb’s DOK: 1**

**Engaging Experience 7**
**Teaching Point:** *Today I’m going to teach you* that you can count groups of numbers to 10 by thinking what number is one greater and one less than another number.

**Suggested Length of Time:** 1 day

**Standards Addressed**
- **Priority:** K.NS.A.4

**Detailed Description/Instructions:**
- **One way to do this** is to use lesson 3-7 to teach that there is a specific order to the set of whole numbers.

**Bloom’s Levels: Apply/Understand**
**Webb’s DOK: 1**

**Engaging Experience 8**
**Teaching Point:** *Today I want to teach you* that you can use counting patterns to solve a problem by finding different ways to make a number.

**Suggested Length of Time:** 1 day

**Standards Addressed**
- **Priority:** K.NS.B.8

**Detailed Description/Instructions:**
- **One way to do this** is to use lesson 3-8 to teach that good math thinkers look for patterns in math to help solve problems.

**Bloom’s Levels: Remember**
**Webb’s DOK: 1**

---

**Engaging Scenario - Topic 3**

**3-Act Math: By the Handful - page 92**
In the 3-Act Math for Topic 3, students draw on their conceptual understanding of counting and comparing numbers. They make use of representations and tools, such as *drawings that represent the problem, counting tools, and verbal counting.*

**Topic 4: Compare Numbers 0 to 10**
Students compare numbers to 10 using matching and counting strategies.

**Essential Questions:**
- How can numbers from 0 to 10 be compared and ordered?

**Enduring Understandings:**
- In a pair of numbers, the number that shows more is greater. The number that shows
fewer is less.

- The numbers 5 and 10 can be used as benchmarks to compare numbers.
- Relationships between numbers can be expressed by saying 1 more, 1 fewer, 2 more, 2 fewer.

Priority Standards for unit:
- **K.NS.C.10** Compare two or more sets of objects and identify which set is equal to, more than or less than the other.

Supporting Standards for unit:
- **K.NS.A.2** Count forward beginning from a given number between 1 and 20.
- **K.NS.C.11** Compare two numerals, between 1 and 10, and determine which is more than or less than the other.

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<td>Understand</td>
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</tr>
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<td>K.NS.C.10</td>
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<td>Identify</td>
<td>Remember</td>
<td>1</td>
</tr>
</tbody>
</table>

Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
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</tr>
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<tr>
<td>compare</td>
<td>greater than</td>
</tr>
<tr>
<td>identify</td>
<td>less than</td>
</tr>
<tr>
<td></td>
<td>equal to</td>
</tr>
<tr>
<td></td>
<td>more than</td>
</tr>
<tr>
<td></td>
<td>fewer than</td>
</tr>
<tr>
<td></td>
<td>the same as</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** *Today I want to teach you* that you can compare groups of up to 10 objects by matching objects and determining which group is greater or less than the other.

**Suggested Length of Time:** 1 day

**Standards Addressed**
- **Priority:** K.NS.C.10

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 4-1 to teach that when comparing two groups, the group with more objects is greater in number than the other. The group with fewer objects is less in number than the other.

**Bloom’s Levels:** Understand/Remember

**Webb’s DOK:** 1

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Engaging Experience 2
Teaching Point: Today I want to teach you that you can compare groups of numbers using numerals up to ten by counting how many and identifying which group is greater or less than the other.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.NS.C.10
Detailed Description/Instructions:
  □ One way to do this is to use lesson 4-2 to teach that in a pair of numbers, the number that tells more is greater. The number that tells fewer is less.
Bloom’s Levels: Understand/Remember
Webb’s DOK: 1

Engaging Experience 3
Teaching Point: Today I want to teach you that you can compare numbers by counting the number of objects in a group, writing the total number and using words like greater than and less than.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.NS.C.10
Detailed Description/Instructions:
  □ One way to do this is to use lesson 4-3 to teach that two groups can be compared by counting the number of objects in each group and finding the position of each number within the counting sequence.
Bloom’s Levels: Understand/Remember
Webb’s DOK: 1

Engaging Experience 4
Teaching Point: Today I want to teach you that you can compare two numbers by knowing where the number is in a counting sequence.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.NS.C.10
Detailed Description/Instructions:
  □ One way to do this is to use lesson 4-4 to teach that two numbers can be compared by finding the position of each number within the counting sequence.
Bloom’s Levels: Understand/Remember
Webb’s DOK: 1

Engaging Experience 5
Teaching Point: Today I want to teach you that you can repeat something from one problem to help solve another problem by thinking what is one more.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.NS.C.10
Detailed Description/Instructions:
☐ One way to do this to use lesson 4-5 to teach that good math thinkers look for things that repeat in a problem. They use what they learn from one problem to help them solve other problems.

Bloom’s Levels: Understand/Remember
Webb’s DOK:1
Unit 2: Measurement and Data Part 1

Subject: Math
Grade: K
Name of Unit: Measurement and Data Part 1
Length of Unit: 8 days

Overview of Unit: In this unit, students will learn to compare measurable attributes, classify objects into categories and count/compare categories.

In Topic 5: Students classify objects into categories. They count and compare the number of objects in each category.

Getting Ready for the Unit:
- Counters
- Attribute blocks
- Prepare stations

Assessment Options:

<table>
<thead>
<tr>
<th>Formative Assessment Options</th>
<th>Summative Assessment Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</td>
<td>(Administered at the end of unit or topic to assess mastery of learning objectives.)</td>
</tr>
<tr>
<td>● Topic Pretest</td>
<td>● Topic Assessment Practice</td>
</tr>
<tr>
<td>● Quick Checks (Check marks within lesson)</td>
<td>● Topic Performance Task</td>
</tr>
<tr>
<td>● One-on-One Conferring</td>
<td>● Online version</td>
</tr>
<tr>
<td>● Convince Me</td>
<td>● Cumulative/ Benchmark Assessment (print or online)</td>
</tr>
</tbody>
</table>

Math Review:
- Math Anytime
  - Daily Review
  - Today’s Challenge
  - Fluency
    - enVision 2020
- Topic Opener: Review What You Know
- Vocabulary Review

Number Routines: Topic 5

<table>
<thead>
<tr>
<th>Number Talks: Dot Images with Numbers 0-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Unit 1</td>
</tr>
<tr>
<td>Number Talks: Five and Ten-Frames with Numbers 0-10</td>
</tr>
</tbody>
</table>

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Number Talk: Rekenreks with the Numbers 3-10

Rekenrek number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems or provides opportunities for students to reason with the same quantity from multiple perspectives. This provides an opportunity to informally assess whether the student is unitizing a specific amount and conserving number.

As each problem is shown on a rekenrek, ask students, “How many beads do you see? How do you see them?”

<table>
<thead>
<tr>
<th>Number 3 Example</th>
<th>Number 7 Example</th>
<th>Number 10 Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 0 on top</td>
<td>B. 3 on top</td>
<td>C. 5 on top</td>
</tr>
<tr>
<td>2 on bottom</td>
<td>3 on bottom</td>
<td>5 on bottom</td>
</tr>
<tr>
<td>B. 1 on top</td>
<td>B. 3 on top</td>
<td>B. 4 on top</td>
</tr>
<tr>
<td>2 on bottom</td>
<td>4 on bottom</td>
<td>6 on bottom</td>
</tr>
<tr>
<td>C. 3 on top</td>
<td>C. 4 on top</td>
<td>C. 3 on top</td>
</tr>
<tr>
<td>0 on bottom</td>
<td>3 on bottom</td>
<td>7 on bottom</td>
</tr>
<tr>
<td>D. 2 on bottom</td>
<td>D. 7 on bottom</td>
<td>D. 2 on bottom</td>
</tr>
<tr>
<td>3 on top</td>
<td>0 on top</td>
<td>8 on top</td>
</tr>
</tbody>
</table>

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

Number Talk: Images or Objects to Classify and Count Groups of Objects

Description: Use images of 2 groups of objects (red vs yellow counters) or 2 group of objects in the class (boys vs. girls, short sleeves vs long sleeves, etc) Use the image/objects to explore what students notice and/or are wondering.

Goal: To classify groups of objects and tell how many in the group

Make sure to include coins in these Number Routines so you teach the standard “K.GM.B.5 Identify pennies, nickels, dimes and quarters”.
Go to Schoology to access a SMART Notebook with additional examples

**Additional Personalized Practice and Application Suggestions:**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
</table>
| ● Reteach to Build Understanding  
● Intervention Activity  
● Additional Practice | ● Build Mathematical Fluency  
● Additional Practice | ● Enrichment  
● Pick a Project  
● enVision STEM Activity |

**Daily Routines**

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

**Continued Daily Routines:** Monthly Calendar, Number of Days in School, Number Line to 20, Growing Number Line to 100, Daily Schedule

No new daily routines for this unit.

**Learning Station Bank**

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

**Learning Station Descriptions**

**Title:** Oscar’s Trash Collection  
**Objective:** Sort various pictures of objects by their attributes.  
● Students sort items that appear in Oscar’s trash by color, shape, and other attributes.  
● This game could be used with students who have difficulty recognizing attributes or need additional practice with the process of sorting.

**Resources**

Computer  
http://www.sesamestreet.org/games?id=196
Title: Attribute Block Sort
Objective: Practice sorting attribute blocks by shape, size and color.
● Have students arrange blocks that are similar in groups together.
● Have them explain to their partner how they are similar (“guess my rule”). Did your partner sort by color? By shape? By size?
● Take turns being the sorter and the guesser.

attribute blocks, buttons of various shapes/sizes

Topic 5: Classify and Count Data
Students classify objects into categories. They count and compare the number of objects in each category.

Essential Questions:
● What are different ways objects can be grouped?

Enduring Understandings:
● Attributes can be used to compare and sort objects.
● Attributes such as color, shape, or size can be used to sort the same set of objects in different ways.
● A set of objects can be sorted according to a combination of attributes.

Priority Standards:
● K.DS.A.1 Classify objects into given categories; count the number of objects in each category.
● K.DS.A.2 Compare category counts using appropriate language.

Supporting Standards for unit:
● K.GM.B.5 Identify pennies, nickels, dimes and quarters (Number Routines)

<table>
<thead>
<tr>
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<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.DS.A.1</td>
<td>objects into given categories; count the number of objects in each category</td>
<td>classify</td>
<td>understand</td>
<td>1</td>
</tr>
<tr>
<td>K.DS.A.2</td>
<td>category counts using appropriate language</td>
<td>compare</td>
<td>understand</td>
<td>1</td>
</tr>
</tbody>
</table>

Unit Vocabulary:

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<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
</table>

BOE Approved June 20, 2019
Engaging Experience 1
Teaching Point: Today I want to teach you that you can classify objects into categories and tell why they are in each category by their attributes.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.DS.A.1
Detailed Description/Instructions:
  □ One way to do this is to use lesson 5-1 to teach that objects can be classified into two categories, based on whether they have or do not have a particular attribute.
Bloom’s Levels: Understand
Webb’s DOK: 1

Engaging Experience 2
Teaching Point: Today I want to teach you that you can count how many objects are in different categories by using their particular attribute.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.DS.A.1
Detailed Description/Instructions:
  □ One way to do this is to use lesson 5-2 to teach that objects can be classified into categories, based on whether they have or do not have a particular attribute. Each group can then be counted.
Bloom’s Levels: Understand
Webb’s DOK: 1

  Another way to do this is to give each child a medium-sized handful of buttons. Allow children time to sort through these buttons or put them into categories. Have children sort the buttons by colors and share out with the people at their tables how they sorted their buttons. Sort them by two holes and not two holes. Have them share with their table which pile has more. Do they have any buttons without any holes? Tell them that these kind of buttons have what is called a shank. These are usually used on coats or thicker materials. Ask the children if there are any other ways they could sort the buttons? Share with their table and allow them to think and then sort. If they get stuck, you can suggest some of the following ways to sort their buttons: big buttons and not big buttons, thick and not thick, round and not round, smooth and not smooth, words and not words, designs and no designs, etc.
Bloom’s Levels: Understand
Webb’s DOK: 2

BOE Approved June 20, 2019
Engaging Experience 3
Teaching Point: Today I want to teach you that you can use counting to compare how many objects are in categories by counting how many objects are in each group and then using words like greater than and less than.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.DS.A.2
Detailed Description/Instructions:
  □ One way to do this is to use lesson 5-3 to teach that data can be sorted and compared in a variety of ways. Objects can be sorted by putting those with a particular attribute in one group and those without the attribute in another group. Then, the groups can be counted and the categories can be compared by count.
Bloom’s Levels: Understand
Webb’s DOK: 1
Another way to do this is to read the story, “A Lost Button”, in the book, Frog and Toad Are Friends by Arnold Lobel. Give each child a handful of buttons. Be sure that one child has the button that is described as Toad’s lost button: large, round, thick, white button with four holes. Tell children that you’re going to read them a story called, “A Lost Button”. It’s about two friends, Frog and Toad who go for a walk and realize that Toad has lost his button and they are going to go back to all of the places they walked to try to find the Toad’s button. As Toad gives clues about his button, they will have to remove the buttons that do not have the attribute or description that Toad gives. For example, the first attribute that Toad says is on page 31. “That is not my button…That button is black. My button was white.” The children would remove all of the buttons in their pile that are not white. They should just have buttons that are white in front of them and the buttons that are not white would be pushed away. Continue with the story. The next one says that his button has 4 holes. Children would remove all of the buttons that are in their white pile that do not have 4 holes into the “discard pile”, you will carry on and then one child should be able to say, “I found Toad’s button! It’s a button that is white, four holes, big, round and thick!” Finish reading the story.
Bloom’s Levels: Understand
Webb’s DOK: 2

Engaging Experience 4
Teaching Point: Today I want to teach you that you can tell whether the way objects have been sorted, counted, and compared makes sense by comparing objects and talking about what others do.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.DS.A.2
Detailed Description/Instructions:
  □ One way to do this is to use lesson 5-4 to teach that good math thinkers use math to explain why they are right. They can talk about the math that others do too.
Bloom’s Levels: Understand
Webb’s DOK: 1
Another way to do this is to have children design buttons of their own using paper plates. Have additional supplies such as small black circles for “holes” of the button, craft/art paper, markers, glue and glitter to decorate the plate to make the button their own. After children have completed designing their buttons, have children come down to the floor and lay the buttons on the floor. Demonstrate how you can put all of the buttons into two categories. For instance, you can make a pile of kid-made buttons with four holes and not four holes. Have the children look at the two piles and guess your rule. Have children share how you sorted the buttons and explain how they know; what did they have to look at in order to guess how the buttons were sorted. Put the kid-made buttons back in the middle and sort them a different way. Again, have children guess your rule. See if children can create their own ways to sort and have their peers guess their rule. These kid-made buttons can be placed in a center for children to continue to find additional ways to sort.

Bloom’s Levels: Understand
Webb’s DOK: 2

Engaging Scenario - Topic 5

3-Act Math: Stripes and Solids - page 172
In the 3-Act Math for Topic 5, students draw on their conceptual understanding of attributes and classifying. They make use of representations and tools, such as cube trains, counters and tally tables.
Unit 3: Geometry

Subject: Math
Grade: K
Name of Unit: Geometry
Length of Unit: 21 Days

Overview of Unit: In this unit, students will learn to identify and describe shape attributes, describe the relative position of objects and compose shapes to form larger shapes.

In Topic 12: Students identify and describe basic two- and three-dimensional shapes. They describe the relative position of shapes.
In Topic 13: Students analyze, compare, and create two- and three-dimensional shapes based on their attributes.

Getting Ready for the Unit:
- Prepare stations
- 2D and 3D shapes (printed out tools and real life objects)
- Pattern blocks
- Number cards 1-10
- Connecting cubes
- Attribute blocks
- Various materials to build 2D shapes (yarn, string, pipe cleaners, straws, scissors, tape)
- Various materials to build 3D shapes (small cubes, clay, craft sticks, straws, yarn, pipe cleaners, paper, etc.)

Assessment Options:

<table>
<thead>
<tr>
<th>Formative Assessment Options</th>
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BOE Approved June 20, 2019
Math Review:
- Math Anytime
  - Daily Review
  - Today’s Challenge
  - Fluency
    - enVision 2020
- Topic Opener: Review What You Know
- Fluency Practice/Review Activity
- Vocabulary Review

Counting and Cardinality Routines (enVision 2020)

<table>
<thead>
<tr>
<th>Topic 13</th>
<th>Square Counting</th>
</tr>
</thead>
</table>

Number Routines: Topic 12 and Topic 13

**Number Talk: Geometric Subitizing Cards**

https://gfletchy.com/2016/10/10/geometric-subitizing-a-different-kind-of-number-talk/

Additional Personalized Practice and Application Suggestions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
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<td>Reteach to Build Understanding</td>
<td>Build Mathematical Fluency</td>
<td>Enrichment</td>
</tr>
<tr>
<td>Intervention Activity</td>
<td>Additional Practice</td>
<td>Pick a Project</td>
</tr>
<tr>
<td>Additional Practice</td>
<td></td>
<td>enVision STEM Activity</td>
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Daily Routines

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.
**Continued Daily Routines:** Monthly Calendar, Number of Days in School, Number Line to 20, Growing Number Line to 100, Daily Schedule

**New Routine:** Introduce this routine near the beginning of the unit.

**Title:** Position Words  
**Objective:** Practice using position words.

**Description:** Find a fun picture or object (possibly your school mascot printed out or a stuffed animal?) that can be moved around the room to different places each day. Ask your students to describe its location in relation to another object (“Here is our classroom door. Where is the Panther compared to the door?” Possible answer: ”The Panther is over the door.”) Move the object every 2-3 days and have the students describe its new location.

---

**Learning Station Bank**

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

<table>
<thead>
<tr>
<th>Learning Station Descriptions</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Title:** Concentration  
**Objective:** Match shape names with shape pictures.  
- Students play a traditional concentration game with a partner.  
- Within the game, choose any two windows.  
- If the images under the selected windows are equivalent, a match is made.  
- In one-player mode, the game ends when all matches are made. In two-player mode, points are earned for matches. The player with the most points wins.  
- Wins will translate into socks, which will hang in between the buildings. | Computer  
tinyurl.com/z38gqyr |
| **Title:** Exploring 3-D shapes  
**Objective:** Tactile exploration of 3-D shapes.  
- Lay out the objects and allow students to build with them, roll or stack them, or any other controllable activity.  
- As students explore the 3-D objects, ask questions such as: How many edges/vertices? What shapes do you see on the sides/faces? Does it roll? Can you stack other 3-D shapes on top of it? Pick up a sphere (or other shape). What does it feels like? Does it look different when you turn it? | Real life 3-D objects from home or school |
| **Title:** Making 2-D shapes  
**Objective:** Tactile exploration of 2-D shapes.  
- Lay out chosen materials and shape cards.  
- Have students use the materials to recreate the shapes on the cards.  
- As students create the 2-D shapes, ask questions such as: How many sides does it have? How many corners? Are the large square and the small square the same? How are they alike? How are they different? Can you use a popsicle stick to make a circle? Why not? | Wiki Sticks, Geoboards, pipe cleaners, or popsicle sticks  
Shape cards from Unit 0 and any other shape pictures available |
| **Title:** 2-D Pattern Block Puzzles  
**Objective:** Practice composing shapes from other shapes.  
- Have Pattern Block pictures and Pattern Blocks available for students to use. | Pattern Block Pictures  
BLMs  
Pattern Blocks |

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Allow students to choose the picture they would like to recreate with the Pattern Blocks. Challenge students to see if they can use different Pattern Blocks to create the same picture.

Credit: Pattern Block Puzzles used with permission from Jessica’s Corner of Cyberspace, http://raebear.net/goodies/patternblocks/edu.html

Title: Mystery Shape
Objective: Identify shapes by their attributes
- Give each student a set of 1” geometric solids and place a barrier in between the students.
- Student A chooses a shape and describes one attribute of that shape.
- If Student B correctly identifies the shape, then she chooses a shape and describes an attribute.
- If Student B does not identify the shape, then Student A continues to describe attributes of the shape, one at a time, until Student B is successful.

1” Geometric Solids
Barrier

Topic 12: Identify and Describe Shapes
Students identify and describe basic two- and three-dimensional shapes. They describe the relative position of shapes.

Essential Questions:
- What characteristics make a shape two-dimensional?
- What 2D and 3D shapes do you see in the environment?
- How do you use mathematical language to describe 2D and 3D shapes?

Enduring Understandings:
- 2D and 3D shapes have specific names regardless of their orientation and size.
- 2D shapes are flat, 3D shapes are solid.

Priority Standards:
- K.GM.C.6 Identify shapes and describe objects in the environment using names of shapes, recognizing the name stays the same regardless of orientation or size.

Supporting Standards:
- K.GM.C.8 Identify and describe the attributes of shapes, and use the attributes to sort a collection of shapes.
- K.GM.C.9 Draw or model simple two-dimensional shapes.
- K.GM.C.7 Describe the relative positions of objects in space (Daily Routines)
<table>
<thead>
<tr>
<th>Standard</th>
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<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.GM.C.6</td>
<td>shapes in the environment using names of shapes</td>
<td>Identify</td>
<td>Remember</td>
<td>1</td>
</tr>
<tr>
<td>K.GM.C.6</td>
<td>objects in the environment using names of shapes</td>
<td>Describe</td>
<td>Understand</td>
<td>1</td>
</tr>
<tr>
<td>K.GM.C.6</td>
<td>the name stays the same regardless of orientation or size</td>
<td>Recognize</td>
<td>Remember</td>
<td>1</td>
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</table>

Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe</td>
<td>2-dimensional shapes (Rectangle, Square, Circle, Triangle, Hexagon, Rhombus)</td>
</tr>
<tr>
<td>Recognize</td>
<td>Solid Figures (Cube, Sphere, Cone, Cylinder)</td>
</tr>
<tr>
<td>Compose</td>
<td>Flat Surface</td>
</tr>
<tr>
<td>Identify</td>
<td>Size</td>
</tr>
<tr>
<td></td>
<td>Side</td>
</tr>
<tr>
<td></td>
<td>Angle</td>
</tr>
</tbody>
</table>

Engaging Experience 1

Teaching Point: *Today I want to teach you* that you can name shapes as flat or solid by identifying if the shape is flat (not thick) or solid (thick).

Suggested Length of Time: 1 day

Standards Addressed

Priority: K.GM.C.6

Detailed Description/Instructions:

- **One way to do this** is to use lesson 12-1 to teach that objects have shape. Some objects, such as a sheet of paper or a photograph, are two-dimensional, or flat shapes. Some objects, such as a ball, can, box, or jar, are three-dimensional, or solid shapes.

Bloom’s Levels: Remember/Understand

Webb’s DOK: 1

Engaging Experience 2

Teaching Point: *Today I want to teach you* that you can identify and describe circles and triangles by telling their attributes.

Suggested Length of Time: 1 day

Standards Addressed

Priority: K.GM.C.6

Detailed Description/Instructions:

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One way to do this is to use lesson 12-2 to teach that a circle is round and does not have any corners (vertices). A triangle has 3 sides and 3 corners (vertices).

**Bloom’s Levels:** Remember/Understand  
**Webb’s DOK:** 1

**Engaging Experience 3**  
**Teaching Point:** *Today I want to teach you* that you can identify and describe squares and other rectangles by telling their attributes.  
**Suggested Length of Time:** 1 day

**Standards Addressed**  
Priority: K.GM.C.6

**Detailed Description/Instructions:**  
- **One way to do this** is to use lesson 12-3 to teach that flat shapes called rectangles have 4 sides and 4 vertices that look the same. A rectangle looks like a door. Squares are special rectangles because their sides are all the same length.

**Bloom’s Levels:** Remember/Understand  
**Webb’s DOK:** 1

**Engaging Experience 4**  
**Teaching Point:** *Today I want to teach you* that you can describe and identify hexagons by telling their attribute.  
**Suggested Length of Time:** 1 day

**Standards Addressed**  
Priority: K.GM.C.6

**Detailed Description/Instructions:**  
- **One way to do this** is by using lesson 12-4 to teach that six-sided flat shapes are called hexagons. These shapes can be found in objects made by people in nature.

**Bloom’s Levels:** Remember/Understand  
**Webb’s DOK:** 1

**Engaging Experience 5**  
**Teaching Point:** *Today I want to teach you* that you can describe and identify solid figures by telling their attributes and comparing them to everyday objects.  
**Suggested Length of Time:** 1 day

**Standards Addressed**  
Priority: K.GM.C.6

**Detailed Description/Instructions:**  
- **One way to do this** is to use lesson 12-5 to teach that spheres, cylinders, cones, and cubes are solid figures. Many everyday objects closely approximate these figures.

**Bloom’s Levels:** Remember/Understand  
**Webb’s DOK:** 1

**Engaging Experience 6**  
**Teaching Point:** *Today I want to teach you* that you can describe shapes in the environment by telling their location in relation to other objects.  
**Suggested Length of Time:** 1 day
Standards Addressed
Priority: K.GM.C.6

Detailed Description/Instructions:

☐ One way to do this is to use lesson 12-6 to teach that objects have shape. Some objects look like flat shapes or solid shapes. The positions of these objects in relation to surrounding objects can be described using words such as above, below, beside, in front of, behind and next to.

Bloom’s Levels: Remember/Understand
Webb’s DOK: 1

Engaging Experience 7
Teaching Point: Today I want to teach you that you can describe the positions of shapes in the environment by being specific about their location.
Suggested Length of Time: 1 day

Standards Addressed
Priority: K.GM.C.6

Detailed Description/Instructions:

☐ One way to do this is to use lesson 12-7 to teach that good math thinkers are careful about what they write and say, so their ideas about math are clear.

Bloom’s Levels: Remember/Understand
Webb’s DOK: 1

Topic 13: Analyze, Compare, and Create Shapes
Students analyze, compare, and create two- and three-dimensional shapes based on their attributes.

Essential Questions:

- How can you describe the similarities and differences between shapes and objects?
- How can shapes be put together to make new shapes?
- How can solid figures be put together to make other solid figures?

Enduring Understandings:

- Attributes are used to compare and analyze shapes.
- Shapes can be combined to make other shapes.
- Solid figures can be combined to make other solid figures.

Priority Standards for unit:

- K.GM.C.10 Compose simple shapes to form larger shapes using manipulatives.

Supporting Standards for unit:

- K.GM.C.9 Draw or model simple two-dimensional shapes.
- K.GM.C.8 Identify and describe the attributes of shapes, and use the attributes to sort a collection of shapes.
- K.GM.C.6 Identify shapes and describe objects in the environment using names of shapes, recognizing the name stays the same regardless of orientation or size.

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<td>simple shapes to form larger shapes using manipulatives.</td>
<td>Compose</td>
<td>Create</td>
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<td>same shape</td>
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<tr>
<td>combine</td>
<td>same size</td>
</tr>
<tr>
<td>compare</td>
<td>roll</td>
</tr>
<tr>
<td></td>
<td>stack</td>
</tr>
<tr>
<td></td>
<td>slide</td>
</tr>
<tr>
<td></td>
<td>flat surfaces (faces)</td>
</tr>
<tr>
<td></td>
<td>vertices (corners)</td>
</tr>
<tr>
<td></td>
<td>solid figures</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** *Today I want to teach you* that you can analyze and compare 2D shapes by listening to clues and finding the shapes described in the clues.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.GM.C.10

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 13-1 to teach that 2D shapes can be sorted and identified by their attributes.

**Bloom’s Levels:** Create

**Webb’s DOK:** 1

**Engaging Experience 2**

**Teaching Point:** *Today I want to teach you* that you can analyze and compare 3D shapes by looking closely at the shapes to see how they move and fit together.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.GM.C.10

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 13-2 to teach that objects shaped like spheres, cones, and cylinders can roll. Objects shaped like cubes, cones, and cylinders can stack and slide.

**Bloom’s Levels:** Create

**Webb’s DOK:** 1

BOE Approved June 20, 2019
Engaging Experience 3  
**Teaching Point:** *Today I want to teach you* that you can analyze and compare 2D and 3D shapes by identifying which 2D shape is the flat surface of the 3D shape.  
**Suggested Length of Time:** 1 day  
**Standards Addressed**  
Priority: K.GM.C.10  
**Detailed Description/Instructions:**  
- **One way to do this** is to use lesson 13-3 to teach that the flat surfaces of many solid figures have specific 2D shapes.  
**Bloom’s Levels:** Create  
**Webb’s DOK:** 1

Engaging Experience 4  
**Teaching Point:** *Today I want to teach you* that you can make sense of problems about shapes by listening to clues to determine which shapes match the clues.  
**Suggested Length of Time:** 1 day  
**Standards Addressed**  
Priority: K.GM.C.10  
**Detailed Description/Instructions:**  
- **One way to do this** is to use lesson 13-4 to teach that good math thinkers know what the problem is about. They have a plan to solve it. They keep trying if they get stuck.  
**Bloom’s Levels:** Create  
**Webb’s DOK:** 1

Engaging Experience 5  
**Teaching Point:** *Today I want to teach you* that you can make 2-D shapes by using other 2-D shapes by using smaller pattern blocks to cover and build a larger shape.  
**Suggested Length of Time:** 1 day  
**Standards Addressed**  
Priority: K.GM.C.10  
**Detailed Description/Instructions:**  
- **One way to do this** is to use lesson 13-5 to teach that you can make 2-D shapes by putting together two or more 2-D shapes.  
**Bloom’s Levels:** Create  
**Webb’s DOK:** 1

Engaging Experience 6  
**Teaching Point:** *Today I want to teach you* that you can build 2-D shapes that match given attributes by using yarn, pipe cleaners, or straws.  
**Suggested Length of Time:** 1 day  
**Standards Addressed**  
Priority: K.GM.C.10  
**Detailed Description/Instructions:**  
- **One way to do this** is to use lesson 13-6 to teach that when building a given 2-D shape, the shape must exhibit all of the attributes of the shape.
Engaging Experience 7

Teaching Point: Today I want to teach you that you can use materials to build 3-D shapes by putting shapes together to form new shapes.

Suggested Length of Time: 1 day

Standards Addressed

Priority: K.GM.C.10

Detailed Description/Instructions:

One way to do this is to use lesson 13-7 to teach that 3-D shapes can be combined to make other 3-D shapes.

Bloom’s Levels: Create
Webb’s DOK: 1

3- ACT Math: Pieced Together - page 508

In the 3-Act Math for Topic 13, students draw on their conceptual understanding of 2-D shapes and composite shapes. They make use of representations and tools, such as shape tiles, a design template, and pictures.

Unit 4: Operations and Algebra

Subject: Math
Grade: K
Name of Unit: Operations and Algebra
Length of Unit: 35 days

Overview of Unit: In this unit, students will gain fluency for addition and subtraction within 5, learn to represent addition and subtraction problems within 10 and decompose numbers less than or equal to 10 in more than one way.

In Topic 6: Students develop an understanding of addition and subtraction by representing the operations in different ways.
In Topic 7: Students develop an understanding of addition and subtraction by representing the operations in different ways.
In Topic 8: Students develop an understanding of addition and subtraction by representing the operations in different ways. They decompose numbers to 10 in more than one way.

Getting Ready for the Unit:

- Prepare stations
- Counters
- Connecting or unifix cubes
- Ten-frames

BOE Approved June 20, 2019
Assessment Options:

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<td>● Online version</td>
</tr>
<tr>
<td>● Convince Me</td>
<td>● Cumulative/ Benchmark Assessment (print or online)</td>
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</tbody>
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Math Review:

- Math Anytime
  - Daily Review
  - Today’s Challenge
  - Fluency
    - enVision 2020
- Topic Opener: Review What You Know
- Fluency Practice/Review Activity (available in Topic 8)
- Vocabulary Review

Counting and Cardinality Routines (enVision 2020)

<table>
<thead>
<tr>
<th>Topic 8</th>
<th>Domino Partners</th>
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</table>

Number Routines:

**Number Talk: Dot Images with Numbers 5-10**

See Unit 1

**Number Talk: Five- and Ten-Frames with Numbers 5-10**

See Unit 1

**Number Talk: Rekenreks with Numbers 5-10**

See Unit 2

Additional Personalized Practice and Application Suggestions:

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BOE Approved June 20, 2019
Daily Routines

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

Continued Daily Routines: Monthly Calendar, Number of Days in School, Number Line to 20, Growing Number Line to 100, Daily Schedule

New Routine: Introduce this routine near the beginning of the unit.

Title: Addition with Attendance
Objective: Use an everyday situation to practice addition.

Description: When a student is absent, ask how many students are here today and how many are absent. Then ask how many more students would need to be there for everyone to be present. Have the students restate the quantities in an addition sentence, “20 students present plus 2 students absent equals 22 students all together.”

Revised Routine: Introduce this routine when you get to the subtraction lessons in the curriculum.

Title: Subtraction with Attendance
Objective: Use an everyday situation to practice subtraction.

Description: When a student is absent, ask how many students there are in the class and how many are absent. Then ask how many students are here today. Have the students restate the quantities in a subtraction sentence, “22 students in the class minus 2 students who are absent equals 20 students here today.”

Learning Station Bank

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

<table>
<thead>
<tr>
<th>Learning Station Descriptions</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Title:** I Need More to Make Ten  
**Objective:** Practice combinations to ten. 
● Students play in partners  
● Partner A rolls the die and counts out that number of counters onto the Expert Ten Frames Workmat.  
● Partner A uses the sentence frame speech bubble to say how many they have and how many they need.  
● Partner B verifies the work, then partners change roles and play again.  
● Students may record their combinations in their math journals or on a blank piece of paper by writing: ____ and ____ is 10.  | K.3 LS3 Day 2 Game Directions BLM  
K.3 LS3 Day 2 Speech Bubble Frame BLM  
K.3 Expert Ten Frames Workmat BLM  
Dice  
Counters |
| **Title:** Five Frames  
**Objective:** Add quantities in five frames.  
● Students play the addition level of a game they played in Unit K.3.  
● Students move red and blue circles onto an empty five frame, then add the quantities together to determine the total.  | Computer or tablet  
http://tinyurl.com/hf5gya3 |
| **Title:** Ten Frames  
**Objective:** Recognize and add quantities in a ten frames.  
● This is the same game as above with a ten frames.  | Computer or tablet  
http://tinyurl.com/jlmr5hk |
- Students play any level of the game (How Many, Build, Fill, Add) in a ten frames.

<table>
<thead>
<tr>
<th>Title: What’s Under the Plate?</th>
<th>Objective: Make combinations to 5.</th>
<th>Small paper or plastic plate Counters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students play in pairs.</td>
<td>Students play in pairs. Each pair gets 5 counters and 1 plate.</td>
<td>Counters</td>
</tr>
<tr>
<td>Each pair gets 5 counters and 1 plate.</td>
<td>Some counters are placed under the plate and the rest on top.</td>
<td></td>
</tr>
<tr>
<td>The object is for the student to determine the number of counters hiding under the plate.</td>
<td>Students may use the following sentence frame: <em>I know there are 5 counters in all. I see ____ counters, so ____ are under the plate.</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Roll the Dice</th>
<th>Objective: Practice addition with manipulatives.</th>
<th>Roll the Dice BLM S C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students play in pairs. Each pair of students gets one Roll the Dice worksheet.</td>
<td>Students play in pairs. Each pair of students gets one Roll the Dice worksheet.</td>
<td>Roll the Dice BLM S C</td>
</tr>
<tr>
<td>Each student has a marker of a different color.</td>
<td>Each student has a marker of a different color.</td>
<td>Roll the Dice BLM S C</td>
</tr>
<tr>
<td>Student A rolls two dice, finds the sum, and traces the number on the worksheet that corresponds to the answer with his/her marker.</td>
<td>Student A rolls two dice, finds the sum, and traces the number on the worksheet that corresponds to the answer with his/her marker.</td>
<td>Roll the Dice BLM S C</td>
</tr>
<tr>
<td>Student A then passes the dice to Student B rolls both dice, finds the sum, and traces the correct number on the worksheet with his/her marker.</td>
<td>Student A then passes the dice to Student B rolls both dice, finds the sum, and traces the correct number on the worksheet with his/her marker.</td>
<td>Roll the Dice BLM S C</td>
</tr>
<tr>
<td>Play continues this way until one of the numbers wins (i.e., all of the numbers of that quantity have been traced).</td>
<td>Play continues this way until one of the numbers wins (i.e., all of the numbers of that quantity have been traced).</td>
<td>Roll the Dice BLM S C</td>
</tr>
<tr>
<td>Dice may be modified to add up only to 10 by covering the 6 with a sticker marked 0.</td>
<td>Dice may be modified to add up only to 10 by covering the 6 with a sticker marked 0.</td>
<td>Roll the Dice BLM S C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Shake and Spill</th>
<th>Objective: Addition practice with manipulatives to 5 or 10</th>
<th>2-color counters Cup Blank paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide one cup and five two-sided counters for each pair of students.</td>
<td>Provide one cup and five two-sided counters for each pair of students.</td>
<td>2-color counters Cup Blank paper</td>
</tr>
<tr>
<td>Students shake the cup and spill out the counters, count the number of each color counter, draw a picture, and write an equation for each addition problem.</td>
<td>Students shake the cup and spill out the counters, count the number of each color counter, draw a picture, and write an equation for each addition problem.</td>
<td>2-color counters Cup Blank paper</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Addition Clash</th>
<th>Objective: Addition practice with number cards to 5 or 9</th>
<th>0–5 number cards, 4 of each counters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shuffle the cards and place them in a pile face down.</td>
<td>Shuffle the cards and place them in a pile face down.</td>
<td>0–5 number cards, 4 of each counters</td>
</tr>
<tr>
<td>Each player draws and turns over 2 cards and adds the numbers on their cards together.</td>
<td>Each player draws and turns over 2 cards and adds the numbers on their cards together.</td>
<td>0–5 number cards, 4 of each counters</td>
</tr>
<tr>
<td>The player with the higher sum is the winner.</td>
<td>The player with the higher sum is the winner.</td>
<td>0–5 number cards, 4 of each counters</td>
</tr>
</tbody>
</table>

Variations:
- Use Number Quantity cards for students who do not yet know their numerals.
- Use cards 0-9 for students who have mastered 0-5 addition.
- Allow the use of counters as needed.

<table>
<thead>
<tr>
<th>Title: Number Card Subtraction</th>
<th>Objective: Practice subtraction.</th>
<th>Card Subtraction BLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students play in pairs.</td>
<td>Students play in pairs.</td>
<td>0–10 number cards</td>
</tr>
<tr>
<td>Each student has a marker of a different color.</td>
<td>Each student has a marker of a different color.</td>
<td>Card Subtraction BLM</td>
</tr>
<tr>
<td>Each pair of students has a Card Subtraction record sheet and a deck of cards with the numbers 0–10.</td>
<td>Each pair of students has a Card Subtraction record sheet and a deck of cards with the numbers 0–10.</td>
<td>Card Subtraction BLM</td>
</tr>
<tr>
<td>Student A turns over the top card in the stack, subtracts the number on the card from 10, and traces the number on the worksheet which corresponds to the answer with his/her marker.</td>
<td>Student A turns over the top card in the stack, subtracts the number on the card from 10, and traces the number on the worksheet which corresponds to the answer with his/her marker.</td>
<td>Card Subtraction BLM</td>
</tr>
<tr>
<td>Student B turns over the next card, finds the difference from 10, and traces the correct number on the worksheet with his/her marker.</td>
<td>Student B turns over the next card, finds the difference from 10, and traces the correct number on the worksheet with his/her marker.</td>
<td>Card Subtraction BLM</td>
</tr>
<tr>
<td>Play continues this way until one of the numbers “wins” (i.e., all of the numbers of that quantity have been traced).</td>
<td>Play continues this way until one of the numbers “wins” (i.e., all of the numbers of that quantity have been traced).</td>
<td>Card Subtraction BLM</td>
</tr>
</tbody>
</table>

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Topic 6: Understanding Addition
Students develop an understanding of addition by representing the operation in different ways.

**Essential Questions:**
- What is addition?
- How can we use objects, images and other representations to show addition?

**Enduring Understandings:**
- Joining parts to make a whole is one interpretation of addition.
- Joining groups can be shown in an addition expression that uses the plus sign (+)
- Addition number sentences using + and = can be used to show parts of a whole.

**Priority Standards:**
- K.RA.A.2 Demonstrate fluency for addition and subtraction within 5.
- K.RA.A.1 Represent (and solve) addition and subtraction (problems) within 10.

**Supporting Standards:**
- N/A

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.RA.A.2</td>
<td>fluency for addition and subtraction within 5.</td>
<td>demonstrate</td>
<td>Apply</td>
<td>1</td>
</tr>
<tr>
<td>K.RA.A.1</td>
<td>Addition and subtraction within 10.</td>
<td>represent</td>
<td>Understand</td>
<td>1</td>
</tr>
</tbody>
</table>

**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>demonstrate</td>
<td>addition</td>
</tr>
<tr>
<td>represent</td>
<td>subtraction</td>
</tr>
<tr>
<td></td>
<td>number story</td>
</tr>
<tr>
<td></td>
<td>join</td>
</tr>
<tr>
<td></td>
<td>in all</td>
</tr>
<tr>
<td></td>
<td>part</td>
</tr>
<tr>
<td></td>
<td>whole</td>
</tr>
<tr>
<td></td>
<td>all together</td>
</tr>
<tr>
<td></td>
<td>add</td>
</tr>
<tr>
<td></td>
<td>plus sign</td>
</tr>
<tr>
<td></td>
<td>equal sign</td>
</tr>
</tbody>
</table>

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Engaging Experience 1
Teaching Point: *Today I want to teach you* that you can show numbers in many ways.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.RA.A.1
Detailed Description/Instructions:
  - One way to do this is to use lesson 6-1 to teach students that addition can be shown in many ways, such as with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.
Bloom’s Levels: Understand
Webb’s DOK: 1

Engaging Experience 2
Teaching Point: *Today I want to teach you* that you can represent addition as adding to a number using cubes and pictures.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.RA.A.1
Detailed Description/Instructions:
  - One way to do this is to use lesson 6-2 to teach students that adding one or more objects to an existing group is one interpretation of addition.
Bloom’s Levels: Understand
Webb’s DOK: 1

Engaging Experience 3
Teaching Point: *Today I want to teach you* that you can represent addition as putting two or more numbers together using counters and/or pictures.
Suggested Length of Time: 1 day
Standards Addressed
  Priority: K.RA.A.1
Detailed Description/Instructions:
  - One way to do this is to use lesson 6-3 to teach students that putting together parts to make a whole is one interpretation of addition.
Bloom’s Levels: Understand
Webb’s DOK: 1

Engaging Experience 4
Teaching Point: *Today I want to teach you* that you can write an equation to show addition by using the plus sign and equal sign to join groups together.

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Suggested Length of Time: 1 day  
Standards Addressed

Priority: K.RA.A.1

Detailed Description/Instructions:

- **One way to do this** is to use lesson 6-4 to teach students that adding parts together to make a whole is one interpretation of addition. Equations using + and = can be used to show parts of a whole.

Bloom’s Levels: Understand
Webb’s DOK: 1

**Engaging Experience 5**

Teaching Point: *Today I want to teach you* that you can solve addition problems using math tools and drawings to show your thinking.

Suggested Length of Time: 1 day  
Standards Addressed

Priority: K.RA.A.1

Detailed Description/Instructions:

- **One way to do this** is to use lesson 6-5 to teach students that objects, drawings, counting and equations can be used to help solve addition problems.

Bloom’s Levels: Understand
Webb’s DOK: 1

**Engaging Experience 6**

Teaching Point: *Today I want to teach you* that you can use equations to represent and explain addition using manipulatives.

Suggested Length of Time: 1 day  
Standards Addressed

Priority: K.RA.A.1

Detailed Description/Instructions:

- **One way to do this** is to use lesson 6-6 to teach students that objects, drawings, counting, and equations can be used to solve addition problems involving putting together.

Bloom’s Levels: Understand
Webb’s DOK: 1

**Engaging Experience 7**

Teaching Point: *Today I want to teach you* that you can add numbers together using patterns.

Suggested Length of Time: 1 day  
Standards Addressed

Priority: K.RA.A.1

Detailed Description/Instructions:

- **One way to do this** is to use lesson 6-7 to teach students that patterns can be used to help solve addition problems.

Bloom’s Levels: Understand
Webb’s DOK: 1

**Engaging Experience 8**

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Teaching Point: Today I want to teach you that you can model adding different numbers together by drawing, counting, or writing equations.

Suggested Length of Time: 1 day

Standards Addressed

Priority: K.RA.A.1

Detailed Description/Instructions:

- One way to do this is to use lesson 6-8 to teach students that good math thinkers use math they know to show and solve problems.

Bloom’s Levels: Understand
Webb’s DOK: 1

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**Topic 7: Understanding Subtraction**
Students develop an understanding of subtraction by representing the operation in different ways.

Essential Questions:
- What is subtraction?
- How can we use objects, images, and other representations to show subtraction?

Enduring Understandings:
- Separating parts from a whole is one interpretation of subtraction.
- Taking part of a group away is one interpretation of subtraction.
- Comparing two quantities to find how much more/less one quantity is than the other is one interpretation of subtraction.

Priority Standards:
- K.RA.A.2 Demonstrate fluency for addition and subtraction within 5.
- K.RA.A.1 Represent (and solve) addition and subtraction (problems) within 10.

Supporting Standards:
- N/A

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.RA.A.2</td>
<td>fluency for addition and subtraction within 5.</td>
<td>demonstrate</td>
<td>Apply</td>
<td>1</td>
</tr>
<tr>
<td>K.RA.A.1</td>
<td>addition and subtraction within 10.</td>
<td>represent</td>
<td>Understand</td>
<td>1</td>
</tr>
</tbody>
</table>

Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
</table>

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Engaging Experience 1
Teaching Point: *Today I want to teach you* that you can show numbers in many ways using counters, fingers and pictures.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.1 and K.RA.A.2
Detailed Description/Instructions:
- One way to do this is to use lesson 7-1 to teach students that subtraction can be shown in different ways, such as with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.
**Bloom’s Levels:** Understand
**Webb’s DOK:** 1

Engaging Experience 2
Teaching Point: *Today I want to teach you* that you can take apart a number and tell the parts using pictures.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.1
Detailed Description/Instructions:
- One way to do this is to use lesson 7-2 to teach students that separating parts from a whole is one interpretation of subtraction.
**Bloom’s Levels:** Understand
**Webb’s DOK:** 1

Engaging Experience 3
Teaching Point: *Today I want to teach you* that you can represent subtraction as taking away from a whole using counters and pictures.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.1
Detailed Description/Instructions:
- One way to do this is to use lesson 7-3 to teach students that taking parts from a whole is one interpretation of subtraction.
**Bloom’s Levels:** Understand
**Webb’s DOK:** 1

Engaging Experience 4
Teaching Point: *Today I want to teach you* that you can write an equation to show subtraction

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with counters, pictures and math symbols.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.RA.A.1

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 7-4 to teach students that subtraction equations using - and = can be used to show subtraction situations.

**Bloom’s Levels:** Apply

**Webb’s DOK:** 1

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**Engaging Experience 5**

**Teaching Point:** *Today I want to teach you* that you can find the difference of two numbers by listening to story problems and using pictures to solve the problems.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.RA.A.1

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 7-5 to teach students that objects, words, drawings, counting, and equations can be used to help solve subtraction problems involving taking from.

**Bloom’s Levels:** Apply

**Webb’s DOK:** 1

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**Engaging Experience 6**

**Teaching Point:** *Today I want to teach you* that you can find patterns in subtraction equations by using your number order knowledge.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.RA.A.1

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 7-6 to teach students that patterns can be used to help solve subtraction problems.

**Bloom’s Levels:** Apply

**Webb’s DOK:** 1

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**Engaging Experience 7**

**Teaching Point:** *Today I want to teach you* that you can subtract numbers by choosing the best tool to solve the problem.

**Suggested Length of Time:** 1 day

**Standards Addressed**

- **Priority:** K.RA.A.1

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 7-7 to teach students that good math thinkers know how to pick the right tools to solve math problems.

**Bloom’s Levels:** Apply

**Webb’s DOK:** 1

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Engaging Scenario - Topic 7

**3-_ACT Math: Fruit Salad - page 248**
In the 3-Act Math for Topic 7, students draw on their conceptual understanding of subtraction and addition. They make use of representations and tools, such as *pictures, cube trains, and combining objects.*

**Topic 8: More Addition and Subtraction**
Students develop an understanding of addition and subtraction by representing the operations in different ways. They decompose numbers to 10 in more than one way.

**Essential Questions:**
- What are the different ways to make a number?

**Enduring Understandings:**
- There is more than one way to show a number.
- Addition number sentences using + and = can be used to show a number.
- Subtraction number sentences using - and = can be used to show a number.

**Priority Standards:**
- K.RA.A.3 Decompose numbers less than or equal to 10 in more than one way.

**Supporting Standards:**
- K.RA.A.4 Make ten for any number from 1 to 9.
- K.DS.A.1 Classify objects into given categories; count the number of objects in each category.
- K.DS.A.2 Compare category counts using appropriate language.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.RA.A.3</td>
<td>numbers less than or equal to 10 in more than one way.</td>
<td>Decompose</td>
<td>Create</td>
<td>1</td>
</tr>
</tbody>
</table>

**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>pairs</td>
<td>whole</td>
</tr>
<tr>
<td></td>
<td>part</td>
</tr>
<tr>
<td></td>
<td>graph</td>
</tr>
<tr>
<td></td>
<td>join</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** *Today I want to teach you* that you can write an addition equation to solve a word problem by using counters and pictures to help you solve a problem.

**Suggested Length of Time:** 1 day

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Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:
- **One way to do this** is to use lesson 8-1 to teach students that there is more than one way to show a number. An addition equation can show the parts and the whole.

Bloom’s Levels: Apply
Webb’s DOK: 1

Engaging Experience 2
Teaching Point: *Today I want to teach you* that you can solve related addition and subtraction equations using connecting cubes and number sentences.

Suggested Length of Time: 1 day

Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:
- **One way to do this** is to use lesson 8-2 to teach addition and subtraction facts have an inverse relationship. Equations using +, -, and = can be used to show parts of a whole.

Bloom’s Levels: Apply
Webb’s DOK: 1

Engaging Experience 3
Teaching Point: *Today I want to teach you* that you can tell stories to help you solve problems. You can draw pictures to illustrate your story and write an equation.

Suggested Length of Time: 1 day

Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:
- **One way to do this** is to use lesson 8-3 to teach that good math thinkers know how to think about words and numbers to solve problems.

Bloom’s Levels: Apply
Webb’s DOK: 1

Engaging Experience 4
Teaching Point: *Today I want to teach you* that you can write addition and subtraction equations within 5 and remember them by using different strategies such as counting on, using counters, or using pictures to help you solve problems.

Suggested Length of Time: 1 day

Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:
- **One way to do this** is to use lesson 8-4 to teach that addition and subtraction facts can be solved using different strategies.

Bloom’s Levels: Apply
Webb’s DOK: 1

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Engaging Experience 5
Teaching Point: Today I want to teach you that you can write an addition equation to solve a word problem using objects, drawings, and counting.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:
- One way to do this is to use lesson 8-5 to teach students that objects, drawing, counting, and equations can be used to help solve addition problems involving unknown addends.
Bloom’s Levels: Apply
Webb’s DOK: 1

Engaging Experience 6
Teaching Point: Today I want to teach you that you can write an addition equation to solve a word problem by using objects, drawings, and counting.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:
- One way to do this is to use lesson 8-6 to teach students that objects, drawing, counting, and equations can be used to help solve addition problems involving unknown addends.
Bloom’s Levels: Apply
Webb’s DOK: 1

Engaging Experience 7
Teaching Point: Today I want to teach you that you can show how to make a group of 10 using counters and pictures.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:
- One way to do this is to use lesson 8-7 to teach students that there is more than one way to show a number.
Bloom’s Levels: Apply
Webb’s DOK: 1

Engaging Experience 8
Teaching Point: Today I want to teach you that you can write an addition equation to solve a word problem using counters and ten frames.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:
One way to do this is to use lesson 8-8 to teach that objects, drawings, counting, and equations can be used to help solve addition problems involving unknown addends.

Bloom’s Levels: Apply
Webb’s DOK: 1

Engaging Experience 9
Teaching Point: Today I want to teach you that objects, drawings, counting, and equations can be used to help solve addition problems involving unknown addends.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:

One way to do this is to use lesson 8-9 to teach that objects, drawings, counting, and equations can be used to help solve addition problems involving unknown addends.

Bloom’s Levels: Understand
Webb’s DOK: 1

Engaging Experience 10
Teaching Point: Today I want to teach you that objects, drawings, counting, and equations can be used to help solve addition problems involving unknown addends.
Suggested Length of Time: 1 day
Standards Addressed
Priority: K.RA.A.3
Detailed Description/Instructions:

One way to do this is to use lesson 8-10 to teach that objects, drawings, counting, and equations can be used to help solve addition problems involving unknown addends.

Bloom’s Levels: Apply
Webb’s DOK: 1
Unit 5: Counting and Cardinality Part 2

Subject: Math
Grade: K
Name of Unit: Counting and Cardinality Part 2
Length of Unit:

Overview of Unit: In this unit, students will learn number names and the count sequence, count groups of objects and compare numbers.
In Topic 9: Students extend their understanding of number names, the counting sequence, and written numerals to 20.

Getting Ready for the Unit:
- Prepare stations
- Counters
- Number cards 0-10 and 11-20
- Double ten-frame

Assessment Options:

<table>
<thead>
<tr>
<th>Formative Assessment Options</th>
<th>Summative Assessment Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</td>
<td>(Administered at the end of unit or topic to assess mastery of learning objectives.)</td>
</tr>
<tr>
<td>- Topic Pretest</td>
<td>- Topic Assessment Practice</td>
</tr>
<tr>
<td>- Quick Checks (Check marks within lesson)</td>
<td>- Topic Performance Task</td>
</tr>
<tr>
<td>- One-on-One Conferring</td>
<td>- Online version</td>
</tr>
<tr>
<td>- Convince Me</td>
<td>- Cumulative/ Benchmark Assessment (print or online)</td>
</tr>
</tbody>
</table>

Math Review:
- Math Anytime
  - Daily Review
  - Today’s Challenge
  - Fluency
    - enVision 2020
- Topic Opener: Review What You Know
- Fluency Practice/Review Activity
- Vocabulary Review

Counting and Cardinality Routines (enVision 2020)

<table>
<thead>
<tr>
<th>Topic 9</th>
<th>Counting Dots</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Partner Flash</td>
</tr>
<tr>
<td></td>
<td>Rectangle Counting</td>
</tr>
<tr>
<td></td>
<td>Whisper-and Shout Counting</td>
</tr>
</tbody>
</table>
Number Routines: Topic 9

Number Talk: Double Ten Frames (ten and some more)

Ten-Frames with ten (one complete ten-frame) and some more counters below to represent a teen number, which naturally leads into Double Ten-Frames when you get to the number 16 to help them organize all the counters.

Additional Personalized Practice and Application Suggestions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Reteach to Build Understanding</td>
<td>● Build Mathematical Fluency</td>
<td>● Enrichment</td>
</tr>
<tr>
<td>● Intervention Activity</td>
<td>● Additional Practice</td>
<td>● Pick a Project</td>
</tr>
<tr>
<td>● Additional Practice</td>
<td></td>
<td>● enVision STEM Activity</td>
</tr>
</tbody>
</table>

Daily Routines

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

Continued Daily Routines: Monthly Calendar, Number of Days in School, Number Line to 20, Growing Number Line to 100, Daily Schedule

New Routine: Introduce this routine near the beginning of the unit.

Title: Count starting from a number other than one
Objective: Give students practice counting on/back by counting up or back from a number other than one.

Description: Choose a number from 0–10 on the number line and have students count forward or backward 5 numbers. For example, tell the students, “Let’s start at 6 and count forward 5 numbers. 6, 7, 8, 9, 10. Let’s start at 3 and count forward 5 spaces. 3, 4, 5, 6, 7. Let’s start at 8 and count backwards 5 numbers. 8, 7, 6, 5, 4.”

You may wish to introduce this activity by having the students “count the numbers in their heads” before counting on. For example, have the students nod their heads or mouth without sound the numbers before the number they will start with while you whisper them or count them out on your fingers; “nod (1), nod (2), nod (3), nod (4), nod (5), 6, 7, 8, 9, 10, 11.”

When students show good fluency starting with number up 10, vary the amount you count forward or backward (for example count forward 6 numbers) and start with numbers between 10 and 20.

New Routine: Introduce this routine near the middle of the unit.
**Title:** Guess my number  
**Objective:** Students will use their number logic to narrow down and figure out the teacher’s secret number.

**Description:** Say, “I am thinking of a number from 0 to 10” (or if your class is ready for it, 0 to 20). Randomly select a student to try to read your mind and guess what number you are thinking of. Once the student shares a number, say, “My number is greater than ___” or “My number is less than ___.” Have the students cross out numbers that are greater than or less than as it correlates with your secret number. For example, if your secret number is greater than 3, students should cross off the numbers 0, 1, 2 and 3 as you cross them out on your board as well. Select another student to guess. Repeat the steps until a student is able to read your mind and guess your number. If time allows, play again. If it is too challenging for your class to complete on their own boards, do it all together in a whole group activity.

---

**Learning Station Bank**

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

### Learning Station Descriptions

<table>
<thead>
<tr>
<th>Title: Numeral Writing</th>
<th>Objective: Practice writing numerals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students practice writing the numerals 11–19 using whiteboards, sand trays, shaving cream, Play-Doh, or paper and pencils or crayons.</td>
</tr>
<tr>
<td></td>
<td>Have samples of numerals with starting point and stroke direction noted for student reference.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>whiteboards</td>
</tr>
<tr>
<td>sand trays</td>
</tr>
<tr>
<td>shaving cream</td>
</tr>
<tr>
<td>Play-Doh</td>
</tr>
<tr>
<td>paper &amp; pencils or crayons</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Number Match</th>
<th>Objective: Create a set of objects to match teen numerals.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Have enough Small Number Card sets and modified egg cartons to have one for each pair of students at the station plus enough counters to make the numbers.</td>
</tr>
<tr>
<td></td>
<td>Shuffle the cards and have the first partner take the top card. The second student makes the number shown by counting out 10 into the egg carton and continuing with the counters outside the egg carton to the numeral on the card. The first student confirms the count.</td>
</tr>
<tr>
<td></td>
<td>Students switch roles and continue.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Cards (11–19) BLM (from K.4)</td>
</tr>
<tr>
<td>counters</td>
</tr>
<tr>
<td>egg cartons - modified to have 10 pockets instead of 12 OR use ten-frames instead</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Quantity/Number Match Cut and Paste</th>
<th>Objective: Match teen numerals to a given set of objects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Have enough Learning Station Quantity/Number Match BLM sheets, scissors and glue for each student.</td>
</tr>
<tr>
<td></td>
<td>Provide counters for students who need them.</td>
</tr>
<tr>
<td></td>
<td>If you want to make this reusable, laminate and don’t have students glue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity/Number Match BLM</td>
</tr>
<tr>
<td>scissors</td>
</tr>
<tr>
<td>glue</td>
</tr>
</tbody>
</table>

You can also use learning stations from Unit 1 and adapt with numbers to 20.
Topic 9: Count Numbers to 20
Students extend their understanding of number names, the counting sequence, and written numerals to 20.

Essential Questions:
● How do you know how many objects are in a set? If the objects are rearranged, how many will there be then?
● How can numbers from 11 to 20 be counted, read and written?

Enduring Understandings:
● Counting tells how many are in a set, regardless of their arrangement or the order in which they were counted.
● There is a unique symbol that goes with each number word.

Priority Standards for unit:
● K.NS.A.4 Read and write numerals and represent a number of objects from 0 to 20.
● K.NS.B.8 Recognize, without counting, the quantity of groups up to 5 objects arranged in common patterns.

Supporting Standards for unit:
● K.NS.B.5 Say the number names when counting objects, in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
● K.NS.B.6 Demonstrate that the last number name said tells the number of objects counted and the number of objects is the same regardless of their arrangement or the order in which they were counted.
● K.NS.B.9 Demonstrate that a number can be used to represent “how many” are in a set.
● K.NS.A.3 Count forward from a given number between 1 and 20.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.NS.A.4</td>
<td>numerals</td>
<td>Read and write</td>
<td>Apply</td>
<td>1</td>
</tr>
<tr>
<td>K.NS.A.4</td>
<td>a number of objects from 0 to 20</td>
<td>Represent</td>
<td>Understand</td>
<td>1</td>
</tr>
<tr>
<td>K.NS.B.8</td>
<td>without counting, the quantity of groups up to 5 objects arranged in common patterns</td>
<td>Recognize</td>
<td>Remember</td>
<td>1</td>
</tr>
</tbody>
</table>

Unit Vocabulary:

| Academic Cross-Curricular Words | Content/Domain Specific |

BOE Approved June 20, 2019
Engaging Experience 1
Teaching Point: *Today I want to teach you* that you can count and write numbers 11 and 12 by counting objects and writing the last number you said.

Suggested Length of Time:

Standards Addressed
Priority: K.NS.A.4

Detailed Description/Instructions:
- **One way to do this** is to use lesson 9-1 to teach that there is a unique symbol that goes with each number word.

Bloom’s Levels: Apply/Understand
Webb’s DOK: 1

Engaging Experience 2
Teaching Point: *Today I want to teach you* that you can count and write the numbers 13, 14, and 15 by counting objects and writing the last number you said.

Suggested Length of Time:

Standards Addressed
Priority: K.NS.A.4

Detailed Description/Instructions:
- **One way to do this** is to use lesson 9-2 to teach that there is a unique symbol that goes with each number word.

Bloom’s Levels: Apply/Understand
Webb’s DOK: 1

Engaging Experience 3
Teaching Point: *Today I want to teach you* that you can count and write the numbers 16, and 17 by counting objects and writing the last number you said.

Suggested Length of Time:

Standards Addressed
Priority: K.NS.A.4

Detailed Description/Instructions:
- **One way to do this** is to use lesson 9-3 to teach that there is a unique symbol that goes with each number word.

Bloom’s Levels: Apply/Understand
Webb’s DOK: 1

Engaging Experience 4
Teaching Point: *Today I want to teach you* that you can count and write the numbers 18, 19, and 20 by counting objects and writing the last number you said.

Suggested Length of Time:

Standards Addressed
Priority: K.NS.A.4

BOE Approved June 20, 2019
Detailed Description/Instructions:

- **One way to do this** is to use lesson 9-4 to teach that there is a unique symbol that goes with each number word.

*Bloom’s Levels: Apply/Understand*

*Webb’s DOK: 1*

**Engaging Experience 5**

*Teaching Point: Today I want to teach you* that you can count forward from any number to a number within 20 by using a number line.

*Suggested Length of Time:*

*Standards Addressed*

  - Priority: K.NS.A.4

*Detailed Description/Instructions:*

- **One way to do this** is to use lesson 9-5 to teach that when you use the count sequence to count from any number within 20. Numbers become greater when you count up.

*Bloom’s Levels: Apply*

*Webb’s DOK: 1*

**Engaging Experience 6**

*Teaching Point: Today I want to teach you* that you can count to find how many are in a group by recognizing that they can be shown in different ways.

*Suggested Length of Time:*

*Standards Addressed*

  - Priority: K.NS.A.4

*Detailed Description/Instructions:*

- **One way to do this** is to use lesson 9-6 to teach that counting tells how many are in a set, regardless of their arrangement or the order in which they are counted. The last number said when counting a set is the total. Counting is cumulative.

*Bloom’s Levels: Understand/Remember*

*Webb’s DOK: 1*

**Engaging Experience 7**

*Teaching Point: Today I want to teach you* that you can use reasoning to count and write numbers to the number 20 by thinking about the words and the numbers to solve the problem.

*Suggested Length of Time:*

*Standards Addressed*

  - Priority: K.NS.A.4

*Detailed Description/Instructions:*

- **One way to do this** is to use lesson 9-7 to teach that good math thinkers know how to think about words and numbers to solve problems.

*Bloom’s Levels: Apply/Understand*

*Webb’s DOK: 1*

**Engaging Scenario - Topic 9**

BOE Approved June 20, 2019
In the 3-Act Math for Topic 9, students draw on their conceptual understanding of counting and subtraction. They make use of representations and tools, such as *packing labels, diagrams, and counting tools.*

Unit 6: Numbers and Computations

**Subject:** Math  
**Grade:** K  
**Name of Unit:** Numbers and Computations  
**Length of Unit:**

**Overview of Unit:** In this unit, students will learn to compose and decompose numbers into sets of tens and additional ones.

**In Topic 10:** Students compose and decompose numbers from 11 to 19 into ten ones and some further ones to build a foundation for understanding place value.

**Getting Ready for the Unit:**
- Prepare stations
- Counters
- Connecting or unifix cubes
- Double ten-frame

**Assessment Options:**

<table>
<thead>
<tr>
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<th>Summative Assessment Options (Administered at the end of unit or topic to assess mastery of learning objectives.)</th>
</tr>
</thead>
</table>
| ● Topic Pretest  
● Quick Checks (Check marks within lesson)  
● One-on-One Conferring  
● Convince Me | ● Topic Assessment Practice  
● Topic Performance Task  
● Online version  
● Cumulative/Benchmark Assessment (print or online) |

**Math Review:**
- Math Anytime  
  - Daily Review  
  - Today’s Challenge  
  - Fluency  
    - enVision 2020  
- Topic Opener: Review What You Know  
- Fluency Practice/Review Activity  
- Vocabulary Review

**Counting and Cardinality Routines (enVision 2020)**

BOE Approved June 20, 2019
Number Routines: Topic 10

Number Talk: Double Ten Frames (ten and some more)

See Unit 5

Additional Personalized Practice and Application Suggestions:

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
</table>
| ● Reteach to Build Understanding  
● Intervention Activity  
● Additional Practice | ● Build Mathematical Fluency  
● Additional Practice | ● Enrichment  
● Pick a Project  
● enVision STEM Activity |

Daily Routines

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

Continued Daily Routines: Monthly Calendar, Number of Days in School, Number Line to 20, Growing Number Line to 100, Daily Schedule, Count starting from a number other than one

(No new daily routines for this unit)

Learning Station Bank

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

<table>
<thead>
<tr>
<th>Learning Station Descriptions</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Title:** Beat the Timer!  
**Objective:** Practice sequencing the teen numbers  
● Provide students with a set of number cards 10–20.  
● Have students set an egg timer for 5 minutes or less.  
● Have students sequence the number cards before the timer goes off.  
● Use the Number Cards with Dots in the Resources Folder, if needed. | timer  
Number cards 10–20 |
| **Title:** What’s Missing?  
**Objective:** Practice recognizing missing numbers in a sequence  
● Provide each pair of students with a set of number cards, 10–20.  
● Student A sets out the number cards in order and then takes one card away while Student B is not looking.  
● Student B tries to determine which card is missing.  
● Students take turns removing a card as play continues. | Number cards 10-20 |
- Use the **Number Cards with Dots** in the Resources Folder, if needed.

<table>
<thead>
<tr>
<th><strong>Title:</strong> I Can Draw a Teen Number</th>
<th><strong>Objective:</strong> Practice representing the teen numbers in various configurations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students work with a partner to draw a card &amp; count out that many counters.</td>
<td>Students take turns arranging the counters in different configurations and recording them on the I Can a Draw a Teen Number BLM. The I Can a Teen Draw a Teen Number Sample BLM may be used to give students configuration ideas.</td>
</tr>
<tr>
<td>When students have completed the I Can a Draw a Teen Number BLM, they draw a new number and repeat the process on a new record sheet.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Title:</strong> 11–20 Linking Trains</th>
<th><strong>Objective:</strong> Practice decomposing the teen numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have linking cubes already put together into lengths of 11 to 20.</td>
<td>Students choose which train to work with. Break the train into 2 parts. Students count the number of cubes in each part of the train.</td>
</tr>
<tr>
<td>Students record their decomposition with a picture, numbers and, if possible, an equation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Title:</strong> Create Numbers with Double Ten Frames</th>
<th><strong>Objective:</strong> Practice representing teen numbers with a double ten frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shuffle the number cards and put them face down in a pile.</td>
<td>Student 1 takes the top card and uses the counters to create the number on the double ten frames.</td>
</tr>
<tr>
<td>Student 2 continues with his/her turn.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Title:</strong> Teen Clash</th>
<th><strong>Objective:</strong> Practice comparing numbers to determine which is more/less</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shuffle the number cards and put them face down in a pile.</td>
<td>Each student draws a card and turns it over. The student with the higher (or lower) card is the winner of that round and takes all the cards.</td>
</tr>
<tr>
<td>Students continue to draw cards and compare them.</td>
<td>If a student is unsure of their numbers, they may use counters to represent them.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Topic 10: Compose and Decompose Numbers 11 to 19</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students compose and decompose numbers from 11 to 19 into ten ones and some further ones to build a foundation for understanding place value.</td>
</tr>
</tbody>
</table>

**Essential Questions:**
- How can you put together 1 ten and some ones to make the numbers 11 to 19?
- How can we break the numbers 11-19 into parts?

**Enduring Understandings:**
- Numbers from 11-19 can be represented as the sum of 10 and some more ones.
- There is more than one way to show a number.
- Teen numbers can be decomposed as the sum of ten and some ones.
- Number sentences can be written to represent the decomposition of numbers.

**Priority Standards for unit:**
- K.NBT.A.1 Compose and decompose numbers from 11 to 19 into sets of tens with additional ones.

**Supporting Standards for unit:**
- N/A
<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.NBT.A.1</td>
<td>numbers from 11 to 19 into sets of 10 with additional ones.</td>
<td>Compose</td>
<td>create</td>
<td>1</td>
</tr>
</tbody>
</table>

Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>represent</td>
<td>tens</td>
</tr>
<tr>
<td></td>
<td>ones</td>
</tr>
<tr>
<td></td>
<td>how many more</td>
</tr>
<tr>
<td></td>
<td>sum</td>
</tr>
<tr>
<td></td>
<td>ten-frame</td>
</tr>
<tr>
<td></td>
<td>double ten-frame</td>
</tr>
<tr>
<td></td>
<td>set</td>
</tr>
<tr>
<td></td>
<td>part</td>
</tr>
<tr>
<td></td>
<td>whole</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** *Today I want to teach you* that you can use drawings and equations to make the numbers 11, 12, and 13 by using equations to match the number of objects shown.

**Suggested Length of Time:**

**Standards Addressed**

*Priority: K.NBT.A.1*

**Detailed Description/Instructions:**

- *One way to do this* is to use lesson 10-1 to teach that numbers from 11-19 can be represented as the sum of 10 and some more.

**Bloom’s Levels:** Create

**Webb’s DOK:** 1

**Engaging Experience 2**

**Teaching Point:** *Today I want to teach you* that you can make the numbers 14, 15, and 16 by using equations to match the number of objects shown.

**Suggested Length of Time:**

**Standards Addressed**

*Priority: K.NBT.A.1*

**Detailed Description/Instructions:**

- *One way to do this* is to use lesson 10-2 to teach that numbers from 11-19 can be represented as the sum of 10 and some more.

**Bloom’s Levels:** Create

**Webb’s DOK:** 1

**Engaging Experience 3**

BOE Approved June 20, 2019
Teaching Point: Today I want to teach you that you can make the numbers 17, 18, and 19 by using equations to match the number of objects shown.

Suggested Length of Time:

Standards Addressed

Priority: K.NBT.A.1

Detailed Description/Instructions:

☐ One way to do this is to use lesson 10-3 to teach that numbers 11-19 can be represented as the sum of 10 and some more.

Bloom’s Levels: Create

Webb’s DOK: 1

Engaging Experience 4

Teaching Point: Today I want to teach you that you can find parts of the numbers 11, 12, and 13 when one part is 10 by using objects and a 10-frame to show the parts of a sum.

Suggested Length of Time:

Standards Addressed

Priority: K.NBT.A.1

Detailed Description/Instructions:

☐ One way to do this is to use lesson 10-4 to teach that the numbers 11, 12, and 13 can be decomposed as the sum of ten and some ones.

Bloom’s Levels: Create

Webb’s DOK: 1

Engaging Experience 5

Teaching Point: Today I want to teach you that you can find parts of the numbers 14, 15, and 16 when one part is 10 by using objects and a 10-frame to show the parts of a sum.

Suggested Length of Time:

Standards Addressed

Priority: K.NBT.A.1

Detailed Description/Instructions:

☐ One way to do this is to use lesson 10-5 to teach that the numbers 14, 15, and 16 can be decomposed as the sum of ten and some ones.

Bloom’s Levels: Create

Webb’s DOK: 1

Engaging Experience 6

Teaching Point: Today I want to teach you that you can find parts of the numbers 17, 18, and 19 when one part is 10 by using objects and a 10-frame to show the parts of a sum.

Suggested Length of Time:

Standards Addressed

Priority: K.NBT.A.1

Detailed Description/Instructions:

☐ One way to do this is to use lesson 10-6 to teach that the numbers 17, 18, and 19 can be decomposed as the sum of ten and some ones.

Bloom’s Levels: Create

Webb’s DOK: 1

BOE Approved June 20, 2019
Engaging Experience 7
Teaching Point: Today I want to teach you that you can look for patterns to make and find the parts of numbers to 19 by using parts of a 100s chart.

Suggested Length of Time:

Standards Addressed

  Priority: K.NBT.A.1

Detailed Description/Instructions:

  One way to do this is to use lesson 10-7 to teach that good math thinkers look for patterns in math to help solve problems.

Bloom’s Levels: Create
Webb’s DOK: 1
Subject: Math  
Grade: K  
Name of Unit: Counting and Cardinality Part 3  
Length of Unit:  

Overview of Unit: In this unit, students will learn number names and the count sequence, count groups of objects and compare numbers.  

In Topic 11: Students extend their understanding of the counting sequence to 100. They count by tens and ones from any number up to 100.  

Getting Ready for the Unit:  
- Prepare stations  
- Counters  
- 100-chart  

Assessment Options:  

<table>
<thead>
<tr>
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<th>Summative Assessment Options</th>
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<tbody>
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</table>
| - Topic Pretest  
- Quick Checks (Check marks within lesson)  
- One-on-One Conferring  
- Convince Me | - Topic Assessment Practice  
- Topic Performance Task  
- Online version  
- Cumulative/ Benchmark Assessment (print or online) |

Math Review:  
- Math Anytime  
  - Daily Review  
  - Today’s Challenge  
  - Fluency  
    - enVision 2020  
- Topic Opener: Review What You Know  
- Fluency Practice/Review Activity  
- Vocabulary Review  

Counting and Cardinality Routines (enVision 2020)  

<table>
<thead>
<tr>
<th>Topic 11</th>
</tr>
</thead>
</table>
| - Exercise by Decades  
- Hiding Tens  
- 100… More or Less?  
- Rows and Columns |  

BOE Approved June 20, 2019
Number Routines: Topic 11

Number Talk: Hundred Chart

Display a hundred chart and do the following activities:

- Display the hundreds chart with the ten frames column highlighted - talk about what you notice
- Take a “decade” number out and have them identify the missing number and justify their thinking
- Take the first 2 rows of the hundreds chart (0-20) and have a number missing - have them identify the missing number and justify their thinking
- Repeat with higher numbers as your kids are able

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

### Additional Personalized Practice and Application Suggestions:

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reteach to Build Understanding</td>
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### Daily Routines

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

**Continued Daily Routines:** Monthly Calendar, Number of Days in School, Number Line to 20, Growing Number Line to 100, Daily Schedule

---

**New Routine:** Introduce this routine at the start of the unit.

**Title:** Count to 100 by 10s  
**Objective:** Introduce the patterns of 10s

**Description:** Count by 10s on the growing number line, starting with 10. Later, start with other numbers. For example, count by 10s, starting at 3 (13, 23, 33, 43, 53…). For counting by tens, use either the 100s chart, the growing number line, or over the course of the unit, both. Using the 100s chart can help students see the pattern when starting the count from a number other than 10.

---

**New Routine:** Introduce this routine in the middle of the unit.

**Title:** What’s missing?  
**Objective:** To gain experience with numbers to 100 on the hundred chart.

**Description:**
- Each day, choose one number on the chart and ask the students what they know about that number. Have them tell you what number is one more, one less, ten more, and ten less. Have students count forward or backward to a landmark number. For example, if 42 is the number of the day, count backward to 40 and forward to 50. Students should use the chart to help them with these relationships. Use the position words *above*, *below*, *next to*, and *beside*, to describe the locations of the numbers on the chart.
- Use the hundred chart to count forward and backward by 10s.

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### Learning Station Bank

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

#### Learning Station Descriptions

<table>
<thead>
<tr>
<th>Title: Count the Beans</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Objective:** Give students opportunities to practice counting large quantities  
- Provide a container of beans and measuring cups.  
- Have students scoop up beans with the cup and count to see how many beans are in the cup. Students may use ten frames or any other organizing tool to help them keep track of the quantity.  
- Adjust the size of the beans and the cups to the needs of the students. There should be between 10 and 100 beans. | dried beans  
measuring cups  
ten frames |

<table>
<thead>
<tr>
<th>Title: Counting Up!</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Objective:** Practice writing the numbers from 1 up to and beyond 100  
- Students begin with the first page, adding the counting numbers across and then down on the grid, starting from 1.  
- As students work, ask them to look for patterns that can help them to be sure they have written every numeral, in order. | Counting Up BLM  
pencil |
Topic 11: Counting Numbers to 100
Students extend their understanding of the counting sequence to 100. They count by tens and ones from any number up to 100.

Essential Questions:
● How can numbers to 100 be counted using the hundred chart?

Enduring Understandings:
● Numbers are counted and written in a specific sequence on a hundred chart.
● The decade numbers are built on groups of ten. The oral names (thirty) are similar to, but not the same as, the number of tens counted (3 groups of 10).

Priority Standards for unit:
● K.NS.A.1 Count to 100 by ones and tens.

Supporting Standards for unit:
● K.NS.B.9 Demonstrate that a number can be used to represent “how many” are in a set.

<table>
<thead>
<tr>
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<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
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<tr>
<td>K.NS.A.1</td>
<td>to 100 by ones and tens.</td>
<td>Count</td>
<td>Remember</td>
<td>1</td>
</tr>
</tbody>
</table>

Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
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<tbody>
<tr>
<td>Demonstrate</td>
<td>Count</td>
</tr>
<tr>
<td>Represent</td>
<td>How many</td>
</tr>
<tr>
<td></td>
<td>Set/group</td>
</tr>
</tbody>
</table>

Engaging Experience 1
Teaching Point: Today I want to teach you that you can use patterns to count to 30 by using part of a 100s chart.

Suggested Length of Time:

Standards Addressed
Priority: K.NS.A.1

Detailed Description/Instructions:
- One way to do this is to use lesson 11-1 to teach that counting patterns can be seen on a hundred chart in both the rows and the columns. Some patterns can also be heard when counting aloud.

Bloom’s Levels: Remember
Webb’s DOK: 1

BOE Approved June 20, 2019
**Engaging Experience 2**

**Teaching Point:** *Today I want to teach you* that you can use patterns to count to 50 by using part of a 100s chart.

**Suggested Length of Time:**

**Standards Addressed**

- Priority: K.NS.A.1

**Detailed Description/Instructions:**

- One way to do this is to use lesson 11-2 to teach that counting patterns can be seen on a hundred chart in both the rows and the columns. Some patterns can also be heard when counting aloud.

Bloom’s Levels: Remember
Webb’s DOK: 1

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**Engaging Experience 3**

**Teaching Point:** *Today I want to teach you* that you can skip count by tens to 100 using a 100s chart.

**Suggested Length of Time:**

**Standards Addressed**

- Priority: K.NS.A.1

**Detailed Description/Instructions:**

- One way to do this is to use lesson 11-3 by teaching that decade numbers such as 10, 20, … 100 are used to name groups of ten. You can count by tens to 100 by counting only the decade numbers.

Bloom’s Levels: Remember
Webb’s DOK: 1

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**Engaging Experience 4**

**Teaching Point:** *Today I want to teach you* that you can count forward from any number to 100 by ones by using a 100s chart.

**Suggested Length of Time:**

**Standards Addressed**

- Priority: K.NS.A.1

**Detailed Description/Instructions:**

- One way to do this is to use lesson 11-4 to teach that numbers are counted and written in a specific sequence on a hundred chart.

Bloom’s Levels: Remember
Webb’s DOK: 1

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**Engaging Experience 5**

**Teaching Point:** *Today I want to teach you* that you can see patterns when counting by using parts of a 100s chart.

**Suggested Length of Time:**

**Standards Addressed**

- Priority: K.NS.A.1

**Detailed Description/Instructions:**

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One way to do this is to use lesson 11-5 to teach that good math thinkers look for patterns in math to help solve problems.

Bloom’s Levels: Remember
Webb’s DOK: 1

Engaging Scenario - Topic 11

3- ACT Math: Stack Up - page 432
In the 3-Act Math for Topic 11, students draw on their conceptual understanding of counting by ones and tens. They make use of representations and tools, such as connecting cubes, a partial model, and color-coding information.
Subject: Math
Grade: K
Name of Unit: Measurement and Data Part 2
Length of Unit:

Overview of Unit: In this unit, students will learn to compare measurable attributes, classify objects into categories and count/compare categories.

In Topic 14: Students are introduced to the measurable attributes of length, height, capacity, and weight. They describe and compare objects by these attributes.

Getting Ready for the Unit:
- Prepare stations
- Connecting cubes
- Cube trains
- Paper cups of different sizes
- Glue
- Balance scale
- Books

Assessment Options:

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Math Review:
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    - enVision 2020
- Topic Opener: Review What You Know
- Fluency Practice/Review Activity
- Vocabulary Review
### Number Routines: Topic 14

#### Number Talk: Rekenreks with the Numbers 3-10

See Unit 2

#### Number Talk: Image Talk

**Objective:** Compare objects by more than one attribute.

**Description:** Students will compare the height, width, and weight of the 2 objects in each picture. Students may choose objects differently than expected. This presents an excellent opportunity to discuss their reasoning.

#### Suggested Math Talks:

**Question/Prompt:** Which _____ is taller/shorter, larger/smaller, weighs more, weighs less? How do you know?

<table>
<thead>
<tr>
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<th>Image 3</th>
<th>Image 4</th>
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<td><img src="image3.jpg" alt="Image 3" /></td>
<td><img src="image4.jpg" alt="Image 4" /></td>
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</tbody>
</table>

**Anticipated Student Responses:**

“The fat carrot is bigger.” Push students to be more precise with their responses, for example, “How is it bigger?” Students may continue with, “The fat carrot is fatter, and it’s also longer. I think it would weigh more too.”

### Math Review

- Math Anytime
  - Daily Review
  - Today’s Challenge
  - Fluency
    - enVision 2020
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BOE Approved June 20, 2019
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Daily Routines
Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

Continued Daily Routines: Monthly Calendar, Number of Days in School, Number Line to 20, Growing Number Line to 100, Daily Schedule, Count to 100 by 10s, What’s Missing

New Routine: Introduce this routine near the beginning of the unit.

Title: Container Estimation - weight

Objective: To practice comparing the estimated weight of objects

Description: Students compare the weight of two different containers, share guesses, and count the number of objects in each. Repeat the task every 2-3 days with variations as described below.

- Use 2 identical containers. Fill one with crayons and the other with the same number of cotton balls. Have students decide which container is heavier. Students may hold the containers, especially at the beginning of this activity. Tell the students that there are the same number of objects in each container. Ask them which item is heavier, a crayon or a cotton ball.

- Use 2 identical containers. Add some pennies to one container and half that number of pennies to the other jar. Ask students which jar is heavier.

- Use 1 small and 1 large container. Add the same number of pennies to each container. Ask students which jar is heavier.

- Use 1 small and 1 large container. Add twice as many pennies to the large container as the small container. Ask students which jar is heavier.

Learning Station Bank
Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

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<tr>
<td><strong>Title:</strong> Capacity Station</td>
<td>containers of various sizes and shapes</td>
</tr>
<tr>
<td><strong>Objective:</strong> Gain experience with containers of various sizes to help students develop an intuitive understanding of the amount of material a container will hold.</td>
<td>pourable material such as sand, beans or rice</td>
</tr>
<tr>
<td>● Provide a large container (basin, wide mouth bucket, commercial sand table, etc.) that contains a material (sand, rice, small beans, millet, etc.) that can be poured or scooped into cups. Provide various containers of different sizes and shapes.</td>
<td></td>
</tr>
<tr>
<td>● Establish rules about how the materials may be used, for example, material must stay in the container or a cup, must not be thrown or transported around the classroom, etc.</td>
<td></td>
</tr>
</tbody>
</table>

BOE Approved June 20, 2019
Title: Pan Balance Weights
Objective: Gain experience with objects of different weights to help develop an intuitive understanding of the weight of an object. Practice using a balance scale.
- Have a container of objects to weigh (toys, pencils, crayons, etc.) and a container of pennies or paper clips to weigh with.
- Have students choose an object to weigh and place it on one side of the pan balance.
- Add pennies or paper clips to the other side until the scale is balanced or close to balanced.
- Have students count how many pennies or paper clips were added.

Title: Longer or Shorter?
Objective: Compare lengths of paper strips to determine which is shorter and which is longer.
- Students compare paper strip lengths and place the shorter pieces of each color paper in the shorter column and the longer piece in the longer column.

Title: Yarn Measurement
Objective: Determine shortest to longest.
- Have pieces of yarn already cut in a bag. Students will sort the pieces from shortest to longest.

Title: Measure It!
Objective: Estimate the size of objects, then measure with nonstandard measurement tools (paper clips, interlocking cubes, 1-inch tiles, etc.)
- Pick a nonstandard measurement tool to estimate and measure objects in the classroom. Students show their work on the paper.

Topic 14: Describe and Compare Measurable Attributes
Students are introduced to the measurable attributes of length, height, capacity, and weight. They describe and compare objects by these attributes.

Essential Questions:
- How can objects be compared and ordered by length, height, weight and capacity?

Enduring Understandings:
- Objects have measurable attributes that can be recognized and described.
- Objects can be compared and ordered by length and weight.

Priority Standards for unit:
- K.GM.A.2 Compare the measurable attributes of two objects.

Supporting Standards for unit:
- K.GM.A.1 Describe several measurable attributes of objects.

<table>
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BOE Approved June 20, 2019
Engaging Experience 1

Teaching Point: *Today I want to teach you* that you can describe and compare objects by length and height by matching an object up from end to end.

Suggested Length of Time:

Standards Addressed

Priority: K.G.M.A.2

Detailed Description/Instructions:

□ One way to do this is to use lesson 14-1 to teach that when you compare by length or height, you are thinking about how long or tall objects are. Objects can be compared by length or height to see which is longer/taller and which is shorter.

Bloom’s Levels: Understand

Webb’s DOK: 1

Engaging Experience 2

Teaching Point: *Today I want to teach you* that you can describe and compare objects by capacity by comparing their size.

Suggested Length of Time:

Standards Addressed

Priority: K.G.M.A.2

Detailed Description/Instructions:

□ One way to do this is by using lesson 14-2 to teach that when you compare by capacity, you are thinking about how much objects hold. Objects can be compared by capacity to see which holds more and which holds less.

Bloom’s Levels: Understand

Webb’s DOK: 1

Engaging Experience 3

BOE Approved June 20, 2019
Teaching Point: *Today I want to teach you* that you can describe and compare objects by weight by the weight of the objects.

**Suggested Length of Time:**

**Standards Addressed**

Priority: K.GM.A.2

**Detailed Description/Instructions:**

- **One way to do this** to use lesson 14-3 to teach that when you compare weight, you are thinking about how heavy are. Objects can be compared by weight to see which is heavier and which is lighter.

**Bloom’s Levels: Understand**

**Webb’s DOK: 1**

**Engaging Experience 4**

**Teaching Point:** *Today I want to teach you* that you can use measurable attributes to describe different objects by their length, weight, and/or capacity.

**Suggested Length of Time:**

**Standards Addressed**

Priority: K.GM.A.2

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 14-4 to teach that objects have measurable attributes that can be recognized and described.

**Bloom’s Levels: Understand**

**Webb’s DOK: 1**

**Engaging Experience 5**

**Teaching Point:** *Today I want to teach you* that you can use measurable attributes to describe and compare different objects by their length, weight, and/or capacity.

**Suggested Length of Time:**

**Standards Addressed**

Priority: K.GM.A.2

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 14-5 to teach that objects have measurable attributes that can be identified, described, and compared.

**Bloom’s Levels: Understand**

**Webb’s DOK: 1**

**Engaging Experience 6**

**Teaching Point:** *Today I want to teach you* that you can solve math problems about objects with measurable attributes by using precision by lining up the ends of the objects being measured and compared.

**Suggested Length of Time:**

**Standards Addressed**

Priority: K.GM.A.2

**Detailed Description/Instructions:**

- **One way to do this** is to use lesson 14-6 to teach that good math thinkers are careful about what they write and say, so their ideas about math are clear.

BOE Approved June 20, 2019
Bloom’s Levels: Understand
Webb’s DOK: 1