Number Corner November

November Sample Display & Daily Planner
November Introduction .................................................................................................................. 1

November Calendar Grid  Flat & Solid Shapes .................................................................................. 5
Introducing the November Calendar Markers ............................................................................... Day 1 ................................................................. 8
Square & Cube .................................................................................................................................. 9
Circle & Sphere .................................................................................................................................. 11
Rectangle & Cylinder ..................................................................................................................... Day 7 ................................................................. 13
Circle & Cone .................................................................................................................................. 15
Shapes Alive! .................................................................................................................................... Day 12 ................................................................. 17
Making the Pattern Strips ............................................................................................................. Day 14 ................................................................. 18

November Calendar Collector  Collecting Sticks ............................................................................... 19
Spinning for Sticks ........................................................................................................................ Days 1, 6 ................................................................. 21
Looking at the Weekly Collection Total .................................................................................... Days 5, 10 ................................................................. 22
Estimating & Counting the Month’s Total Collection ................................................................ Day 11 ................................................................. 25

November Days in School  Drawing to Make Ten ............................................................................. 27
Drawing to Make Ten ................................................................................................................... Days 3, 8, 13 ................................................................. 29

November Computational Fluency  Combinations of Five ............................................................ 33
Spill the Beans ................................................................................................................................ Days 2, 6, 12 ................................................................. 34
Plunk It ............................................................................................................................................ Days 7, 11, 15 ................................................................. 35

November Number Line  Numbers Before & After .......................................................................... 37
Playing the Before & After Game ............................................................................................ Days 3, 9, 13 ................................................................. 39
Playing Hop High, Count Low .................................................................................................. Days 4, 14 ................................................................. 41
Writing Numbers ........................................................................................................................ Days 5, 10, 15 ................................................................. 43
What’s Behind the Red Door? ..................................................................................................... Day 7 ................................................................. 44

Teacher Masters
Pages renumber each month.
Shape Pair Poster Headings ..................................................................................................... T1
Paper Circle .................................................................................................................................... T3

Number Corner Student Book Pages
Page numbers correspond to those in the consumable books.
Writing Numbers 1 & 2 ................................................................................................................ 5
Writing Numbers 3 & 4 ................................................................................................................ 6
Writing Numbers 5 & 6 ................................................................................................................ 7
November Sample Display

Of the items shown below, some are ready-made and included in your kit; you’ll prepare others from classroom materials and the included teacher masters. Refer to the Preparation section in each workout for details about preparing the items shown. The display layout shown fits on a 10’ × 4’ bulletin board or on two 6’ × 4’ bulletin boards. Other configurations can be used according to classroom needs. If you have extra space to work with, a Number Corner header may be made from bulletin board letters, student-drawn letters, or other materials. You will also need a standard pocket chart this month.

Classroom Number Line
As you accumulate more strips, you may need to move them to another location in the classroom. If possible, keep the number line where students can interact with it—below the bulletin board, for example.

Plastic Link Chains & Ten-Frames
Keep the collected chains and ten-frames from September and October separate, off to the side; you’ll add later months’ chains and ten-frames to this space.

Number Line Pocket Chart
Extra red and blue cards can be kept in a zip-top bag pinned to the board.

How Many Days Have We Been In School?

Calendar Collector Pocket Chart & Collection
You will also post long strips of adding machine tape when the collection is tallied at the end of the third week.

Calendar Grid Pocket Chart
Remember to consult a calendar for the starting day for the month and year.

Finger Pattern Display Cards
Used in Number Corner throughout the year.
<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Calendar Grid</th>
<th>Calendar Collector</th>
<th>Days in School</th>
<th>Computational Fluency</th>
<th>Number Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Activity 1</td>
<td>Activity 1</td>
<td>Update</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Activity 2</td>
<td>Update</td>
<td>Update</td>
<td>Activity 1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Update</td>
<td>Activity 1</td>
<td></td>
<td>Activity 1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Activity 3</td>
<td>Update</td>
<td>Update</td>
<td>Activity 2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Update</td>
<td>Activity 2</td>
<td>Update</td>
<td>Activity 3</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Update</td>
<td>Activity 1</td>
<td>Update</td>
<td>Activity 1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Activity 4</td>
<td>Update</td>
<td>Update</td>
<td>Activity 2</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Update</td>
<td>Activity 1</td>
<td>Update</td>
<td>Activity 4</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Activity 5</td>
<td>Update</td>
<td>Update</td>
<td>Activity 3</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Update</td>
<td>Activity 2</td>
<td>Update</td>
<td>Activity 3</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Update</td>
<td>Activity 3</td>
<td>Update</td>
<td>Activity 2</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Activity 6</td>
<td>Update</td>
<td>Update</td>
<td>Activity 1</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>Update</td>
<td>Activity 1</td>
<td>Update</td>
<td>Activity 1</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>Activity 7</td>
<td>Update</td>
<td>Update</td>
<td>Activity 2</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Update</td>
<td>Update</td>
<td>Update</td>
<td>Activity 2</td>
<td></td>
</tr>
</tbody>
</table>

Note: On days when the Calendar Grid, Calendar Collector, and Days in School are not featured in an activity, the class will update them together. Update procedures are described at the beginning of each workout write-up. Summaries of the update procedures appear below.

**Calendar Grid** – Sing the Days of the Week Song, make predictions about and post the day’s marker, and share observations about the marker.

**Calendar Collector** – Spin the spinner, collect the designated number of craft sticks, count them in several different ways, and add them to the pocket for the week.

**Days in School** – Add a dot to the ten-frame, a link to the chain, and have students figure out how many more are needed in one of the collections to make 10. Count all the dots and links collected so far, and record the result on the Classroom Number Line.
Number Corner
November

Overview
The Calendar Grid workout this month features two- and three-dimensional shapes. During Calendar Collector, the class collects craft sticks and does some comparing and measuring activities. The other three workouts are rich in counting skills, numeral reading and writing, and combinations of 5 and 10.

Activities

<table>
<thead>
<tr>
<th>Workouts</th>
<th>Day</th>
<th>Activities</th>
<th>D</th>
<th>G</th>
<th>SB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar Grid Flat &amp; Solid Shapes</td>
<td>1</td>
<td>1 Introducing the November Calendar Markers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2 Square &amp; Cube</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>3 Circle &amp; Sphere</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>4 Rectangle &amp; Cylinder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>5 Circle &amp; Cone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>6 Shapes Alive!</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>7 Making the Pattern Strips</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calendar Collector Collecting Sticks</td>
<td>1, 6</td>
<td>1 Spinning for Sticks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5, 10</td>
<td>2 Looking at the Weekly Collection Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>3 Estimating &amp; Counting the Month’s Total Collection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days in School Drawing to Make Ten</td>
<td>3, 8, 13</td>
<td>1 Drawing to Make Ten</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computational Fluency Combinations of Five</td>
<td>2, 6, 12</td>
<td>1 Spill the Beans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7, 11, 15</td>
<td>2 Plunk It</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number Line Numbers Before &amp; After</td>
<td>3, 9, 13</td>
<td>1 Playing the Before &amp; After Game</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4, 14</td>
<td>2 Playing Hop High, Count Low</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5, 10, 15</td>
<td>3 Writing Numbers Pages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>4 What’s Behind the Red Door?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D – Discussion, G – Game, SB – Number Corner Student Book
**Teaching Tips**

November frequently has fewer teaching days than previous months because of holidays and parent-teacher conferences. For this reason there are only 15 Number Corner sessions on this month’s planner. If you have additional teaching days this month, consider collecting craft sticks with the class for three weeks instead of two, conducting another day of problem-solving by making the Days in School workout a focus of instruction four days instead of three, or playing some of the games introduced in the Computational Fluency and Number Line workouts. You can also continue to do the daily updates for Calendar Grid and Days in School. Routine is important to young students, and Number Corner is a powerful way to keep a sense of routine through weeks broken up by holidays and other special events.

**Target Skills**

The table below shows the major skills and concepts addressed this month. It is meant to provide a quick snapshot of the expectations for students’ learning during this month of Number Corner.

<table>
<thead>
<tr>
<th>Major Skills/Concepts Addressed</th>
<th>CG</th>
<th>CC</th>
<th>DS</th>
<th>CF</th>
<th>NL</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.CC.1 Count within 100 by 1s or 10s</td>
<td></td>
<td></td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
</tr>
<tr>
<td>K.CC.2 Count forward from a given number, rather than starting at 1</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.CC.3 Write numbers from 0 to 6</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.CC.4a Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.CC.4b Identify the number of objects as the last number said when counting a group of objects</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.CC.5 Given a number from 1–5, count out that many objects</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, and record decompositions with manipulatives</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to that number</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports K.OA Extend and describe simple repetitive patterns</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.MD.2 Directly compare the lengths of two objects, and describe the difference between their lengths</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.G.1 Describe and identify shapes in the environment</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.G.2 Identify shapes, regardless of orientation or size</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.G.3 Identify shapes as two-dimensional or three-dimensional</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.G.4 Analyze and compare two-dimensional and three-dimensional shapes, using informal language to describe their similarities, differences, parts, and other attributes</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.G.5 Model three-dimensional shapes in the world by building them</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.MP.1 Make sense of problems and persevere in solving them</td>
<td>![bullet]</td>
<td></td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.MP.2 Reason abstractly and quantitatively</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.MP.3 Construct viable arguments and critique the reasoning of others</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.MP.7 Look for and make use of structure</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K.MP.8 Look for and express regularity in repeated reasoning</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td>![bullet]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CG** – Calendar Grid, **CC** – Calendar Collector, **DS** – Days in School, **CF** – Computational Fluency, **NL** – Number Line
Materials Preparation

Each workout includes a list of required materials by activity. You can use the table below to prepare materials ahead of time for the entire month.

<table>
<thead>
<tr>
<th>Task</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Copies</strong></td>
<td></td>
</tr>
<tr>
<td>Run copies of Teacher Masters T1–T4 according to the instructions at the top of each master.</td>
<td></td>
</tr>
<tr>
<td>If students do not have their own Number Corner Student Books, run a class set of pages 1–4.</td>
<td></td>
</tr>
<tr>
<td><strong>Charts</strong></td>
<td></td>
</tr>
<tr>
<td>Create four Shape Pair Posters according to preparation instructions in the Calendar Grid workout.</td>
<td></td>
</tr>
<tr>
<td>Set up the collection display according to preparation instructions in the Calendar Collector workout.</td>
<td></td>
</tr>
<tr>
<td><strong>Paper Cutting</strong></td>
<td></td>
</tr>
<tr>
<td>Prior to Activities 3 and 5 of Calendar Grid, respectively, cut the largest circle possible out of a 6” × 6” square of green construction paper and then with a 6” × 6” square of yellow construction paper.</td>
<td></td>
</tr>
</tbody>
</table>
November Calendar Grid
Flat & Solid Shapes

Overview
The calendar markers this month feature two- and three-dimensional shapes: squares, cubes, circles, spheres, cones, rectangles, and cylinders. As students make predictions about upcoming markers based on their observations through the month, they have many opportunities to identify, describe, analyze, and compare these shapes. In addition, there are several short activities in which students explore the relationships between squares and cubes; circles, spheres and cones; and rectangles and cylinders.

Skills & Concepts
- Copy, extend, and describe simple repetitive and growing patterns (supports K.OA)
- Describe and name objects in the environment using geometric shape names (K.G.1)
- Identify shapes, regardless of orientation or size (K.G.2)
- Identify shapes as two-dimensional or three-dimensional (K.G.3)
- Analyze and compare two-dimensional and three-dimensional shapes, using informal language to describe their similarities, differences, parts, and other attributes (K.G.4)
- Model three-dimensional shapes in the world by building them (K.G.5)
- Model with mathematics (K.MP.4)
- Look for and make use of structure (K.MP.7)

Materials

<table>
<thead>
<tr>
<th>Activities</th>
<th>Day</th>
<th>Copies</th>
<th>Kit Materials</th>
<th>Classroom Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1 Introducing the November Grid</td>
<td>1</td>
<td></td>
<td>Used in all Calendar Grid activities: Calendar Grid pocket chart, Flat &amp; Solid Shapes Calendar Markers, Month, Day, and Year Cards</td>
<td>pointer</td>
</tr>
<tr>
<td>Activity 2 Square &amp; Cube</td>
<td>2</td>
<td>TM T1–2</td>
<td>• cube-shaped geoblock</td>
<td>6&quot; × 6&quot; blue construction paper (1 piece)</td>
</tr>
<tr>
<td>Activity 3 Circle &amp; Sphere</td>
<td>4</td>
<td></td>
<td>• sphere-shaped geoblock</td>
<td>6&quot; × 6&quot; green construction paper (1 piece, see Preparation)</td>
</tr>
<tr>
<td>Activity 4 Rectangle &amp; Cylinder</td>
<td>7</td>
<td></td>
<td>• cylinder-shaped geoblock</td>
<td>5&quot; × 8&quot; red construction paper (2 pieces)</td>
</tr>
<tr>
<td>Activity 5 Circle &amp; Cone</td>
<td>9</td>
<td>TM T3</td>
<td>• cone-shaped geoblock</td>
<td>6&quot; × 6&quot; yellow construction paper (1 piece, see Preparation)</td>
</tr>
<tr>
<td>Activity 6 Shapes Alive!</td>
<td>12</td>
<td></td>
<td>• Shape Pair Posters from Activities 2–5</td>
<td>pointer</td>
</tr>
<tr>
<td>Activity 7 Making the Pattern Strips</td>
<td>14</td>
<td></td>
<td>• several 3&quot; × 9&quot; strips of white construction paper</td>
<td>markers</td>
</tr>
</tbody>
</table>

Vocabulary
An asterisk [*] identifies those terms for which Word Resource Cards are available.
- circle*
- cone*
- cube*
- cylinder*
- day
- flat
- Friday
- Monday
- month
- November
- pattern*
- rectangle*
- sphere*
- square*
- Saturday
- solid
- Sunday
- three-dimensional (3-D)
- shape*
- Thursday
- Tuesday
- two-dimensional (2-D)
- shape*
- Wednesday
- week

Copy instructions are located at the top of each teacher master.
Preparation

• Cut the largest circle possible out of a 6” × 6” square of blue construction paper. Do the same with a 6” × 6” square of yellow construction paper. You will need the blue circle for Activity 3 and the yellow circle for Activity 5.

• Run a copy of both the Shape Pair Poster Heading Teacher Masters. Trim the headings and glue each to the top of a sheet of chart paper to create four posters to use through the month. Display the set of four on or near your Number Corner board in the sequence shown here. (Through the month, you will record information on each poster. If you laminate these before you share them with the students and use erasable markers, you can use them again each year.)

Mathematical Background

Young students often refer to a cube as a “square” and a sphere as a “circle.” While these names are incorrect, primary students are correct in intuiting relationships between certain pairs of two- and three-dimensional shapes. This month’s activities are intended to help students understand the difference between flat and solid shapes by investigating the ways in which key pairs of two- and three-dimensional shapes are alike and different, and exploring how they are related.

About the Pattern

The patterns featured this month are described below. Students make and test predictions about the markers each day, discovering patterns as new markers are added and their predictions are confirmed or proven false. Don’t tell them what the patterns are: instead, allow students to pursue their own ideas and investigations until mid-month, when they will work together to generate the pattern strips for this collection of markers based on their observations.

• There is a simple ABAB pattern throughout the month: two-dimensional shape, three-dimensional shape, two-dimensional shape, three-dimensional shape. Each of the three-dimensional shapes is set on a blue colored background to highlight the fact that these shapes, while similar to the two-dimensional shapes that precede them, are not flat.

• Each two-dimensional shape is followed by a three-dimensional shape that is very closely related. For example, the square is followed by a cube; the circle is followed by a sphere; and so on.

• There is a sequence of eight shapes (square, cube; circle, sphere; rectangle, cylinder; circle, cone) that is repeated four times over the course of the month.

• The first set of eight are shapes shown in isolation. The second set of eight are shapes in the environment. The third set shows the shapes in isolation again, while the fourth set shows shapes in the environment.

Key Questions

Use questions and prompts like these to help students identify, describe, and discuss the patterns as they emerge through the month.

• What can you say about the marker we posted yesterday? What shape do you see on that marker? Is the shape two-dimensional or three-dimensional—flat or solid?

• If the shape on yesterday’s marker is three-dimensional, how is it like the two-dimensional shape on the marker before? How is it different?

• What number will we see in the bottom corner for the date on today’s marker?

• Will we see a two-dimensional or three-dimensional shape on today’s marker? How do you know?

• Can you name the shape we’ll see on today’s marker? How do you know?

• Will the shape on the marker for today be something we would see in the world around us, or just a plain old shape? How do you know?

• If the shape on today’s marker will be an object from the world around us, can you guess what that object might be?

• Can you predict what the marker for day after tomorrow will look like? Will the shape on that marker be two-dimensional or three-dimensional? Will it have straight or curved sides (or surfaces)? Will it have corners or not? How do you know?
Update

Begin updating after Day 1. Follow this update procedure every day that the Calendar Grid is not a featured activity.

Procedure

• Have students sing or recite the names of the days of the week as you or the helper points to each of the filled pockets on the Calendar Grid. When you reach the pocket for today, have students identify the name of the day.
• Ask students to make predictions about the marker for the day before it is posted. If they predict that it will be an object that can be found in the world around, can they predict what that object might be?
• Invite a student helper to post the calendar marker for the day.
• Have students briefly share observations about the new marker. Be sure they identify the shape by name and classify it as two-dimensional or three-dimensional, flat or solid.

Literature Connections

If you have access to the books listed below, or similar publications, you might share them with your students this month. The first book features marvelous photographs of the four solid shapes featured on this month’s calendar markers. The other two feature photos and illustrations that provide good opportunities to explore two- and three-dimensional shapes in relation to one another.

Cubes, Cones, Cylinders, & Spheres by Tana Hoban
Shapes, Shapes, Shapes by Tana Hoban
Captain Invincible and the Space Shapes by Stuart J. Murphy
Introducing the November Calendar Markers

The Calendar Grid pocket chart should be empty of markers when the students join you in the discussion area, showing only the Month and the Day Cards.

1. Take a minute or two to help students understand that one month has just ended and a new month has started.
   - Ask students to join you in the discussion area, and seat them close to the display.
   - Note with them that the calendar markers from the previous month are gone, and there are no new markers in the Calendar Grid pocket chart right now.
   - Explain that the month of October is over. A new month has started, and you have a whole new set of calendar markers to share with the class.
   - Draw students’ attention to the month card at the top of the pocket chart. Read the card to the class, noting that the word November starts with a capital N and ends with the letters “b, e, r.”

2. Introduce the new calendar markers.
   - Explain that you’ll put up a new marker as each day of the month passes.
   - Point to the Days of the Week Cards, starting with Sunday, and sing the Days of the Week song once through with the class, pointing to each card as you go. Start the song a second time, but stop on the day November started.
   - Post the marker in the pocket for that day. If the month started on Saturday or Sunday, post the markers needed to update the calendar through today.

   Teacher  November starts on Friday this year, so that’s where we’ll put our first new calendar marker.

3. Ask students to pair-share observations about the new marker(s). What do they notice? What do they see?
   After a few moments, call on students to share their observations with the class.

4. Then ask the students to predict what they might see on the marker for the following day.

   Students  Probably another shape, like maybe a circle.
   Maybe it will be a different color.
   It’s going to have a number 2 on it because 2 comes after 1.
Activity 2

Square & Cube

Day 2

1. Before posting the new marker for the day, ask students to make predictions about the numeral that will appear on it.

   **SUPPORT** Point to the numerals on the markers posted so far and read them with the class. Then have students tell what number comes next. Is that the number they’ll see on today’s marker?

2. Then ask students to share any other predictions they can make about the marker, first in pairs, and then as a whole group.

3. After some students share predictions, call on three or four students to share their ideas with the class.

   *Don’t spend a lot of time on students’ predictions just yet. Many will need more experience with the language of two- and three-dimensional shapes before they’re prepared to say much, and that is what Activities 2–5 are designed to provide.*

4. Have your student helper show and post the marker for the day.

   Give students a few moments to pair-share observations about the new marker.

5. Pull the first two markers out of their pockets, and place them on a chalk or easel ledge where students can see them very clearly.

   Explain that you’re going to take a very close look at these two shapes to think about how they’re alike and how they’re different.

6. Have students seat themselves in a circle in the discussion area. Set the square of blue construction paper and the geoblock cube in the middle of the circle.

   Ask students to pair-share observations about these two objects. Then call on volunteers to share with the class.
Students: Those are kind of like the pictures on the calendar!
There’s a blue square and a wood block.
One is blue. The other one is brown.
That block is made out of wood. I have blocks like that at my house.

7 Move the paper and the block to the side and set a handful of same-colored square Polydrons in the middle of the discussion area. Work with input from the students to identify the shape of one of the Polydrons and build a cube using six of them.

- Point to one of the Polydrons and ask students to identify the shape (square).
- Ask whether anyone knows how to put several or more of these squares together to make a cube.
- Follow students’ instructions to make a cube. As you do so, note with the class that it takes six Polydron squares to make a cube. Explain that if the shape isn’t closed on the top, the bottom, and all four sides, it is a box, but not a cube.

8 Explain that the Polydron square is called a two-dimensional or flat shape, and the Polydron cube is called a three-dimensional or solid shape.

9 As students watch, write the words two-dimensional (flat) on an index card, and the words three-dimensional (solid) on another index card.

- Explain that 2-D and 3-D are abbreviations that some people use to describe two- and three-dimensional shapes.
- Work with input from students to place each card beside the appropriate Polydron shape.
- Invite one student to place the blue paper square and the geoblock cube beside the appropriate labels as well.

10 Next, draw students’ attention to the first Shape Pairs Poster, and work with their input to record some of the ways in which a square and a cube are alike and some of the ways in which they are different.

- Have students name the shapes at the top of the poster, and identify which of the two is two-dimensional and which is three-dimensional.
- Ask them to look again at the squares and cubes in the middle of the discussion area and pair-share ideas about how those two shapes are alike and how they’re different.
- Call on volunteers to share ideas with the class as you record on the chart.

This time, nudge students to move beyond color and material (paper, wood, plastic) to making statements about the shapes rather than the objects. Also, leave some room at the bottom of the poster for later activities.
Alike
• Both of them have squares.
• Both of them have corners and sides.

Different
• The cube is made out of 6 squares.
• The square is flat. The cube is solid.
• The cube goes up from the ground.
• You could put something inside the cube. It could be like a little house.

Activity 3

Circle & Sphere

1. Have students make predictions about the marker for the day, and then ask a student helper to post the marker.

2. Next, pull markers 3 and 4 out of their pockets and place them on a chalk or easel ledge where students can see them very clearly. Explain that you’re going to take a very close look at these two shapes to think about how they’re alike and how they’re different.

3. Have students seat themselves in a circle in the discussion area. Set the green construction paper circle and the geoblock sphere in the middle of the circle.
   Ask students to pair-share observations about these two objects. Then call on volunteers to share with the class.

   Students Those are like the pictures on the calendar!
   The circle is green.
   They’re both circles, but the little one can roll.
   It’s like a ball. The other one is flat.

4. Have students work in pairs to explore spheres and circles using modeling clay.
   • Give each pair of students a quarter-stick of modeling clay and a paper towel.
Ask one student in each pair to roll the clay into a ball-shaped sphere and set it on the paper towel.

Ask students to predict, first in pairs and then as a whole class, what will happen if their partner squashes the sphere as flat as possible.

After a brief discussion, have the other student in each pair press the sphere as flat as possible and discuss the results.

Repeat the process, but have students switch roles, so both students in each pair have a chance to roll the clay into a sphere and flatten it into a circle.

As students work and talk, model and reinforce the use of key vocabulary: circle, sphere, two-dimensional shape, three-dimensional shape, flat, solid.

Move around the circle with a tray to collect the modeling clay and paper towels from students.

Try one more experiment with the clay as students watch.

Form a sphere with two or three of the pieces of clay you just collected.

Place the sphere on a paper towel, and ask students to predict what will happen if you cut the sphere in half.

After a bit of discussion, cut the sphere in half and hold up the halves (hemispheres) for students to see.

Invite students’ comments, observations, and questions.

Now label the paper circle, the geoblock, the clay ball and the flattened clay circle as either two- or three-dimensional.

Show students the two index card labels you made during the previous activity, and read them together.

Invite one student to place the green paper circle and the geoblock sphere beside the appropriate labels. Invite another student to place a clay sphere and a clay circle where they belong as well.

Draw students’ attention to the second Shape Pairs Poster and work with their input to record some of the ways in which a circle and a sphere are alike and some of the ways in which they are different.

Have students name the shapes at the top of the poster, and identify which of the two is two-dimensional and which is three-dimensional.

Ask them to look again at the circles and spheres in the middle of the discussion area and pair-share ideas about how those two shapes are alike and how they’re different.

Call on volunteers to share ideas with the class as you record on the chart.

Encourage students to move beyond color, size, and material (paper, wood, clay) to making statements about the shapes rather than the objects. Also, leave some room at the bottom of the poster for later activities.
Activity 4

Rectangle & Cylinder

Day 7

1. Have students make predictions about the marker for the day, and then ask a student helper to post the marker.

2. Next, pull markers 5 and 6 out of their pockets and place them on a chalk or easel ledge where students can see them very clearly.

3. Have students seat themselves in a circle in the discussion area. Set the red construction paper rectangle and the geoblock cylinder in the middle of the circle.
   - Have students pair-share observations about these two objects. Then call on volunteers to share with the class.
   - As students share observations, encourage them to speculate about the connection between the rectangle and the cylinder. Can they see any way in which the two are related?

4. Form a cylinder with a second red construction paper rectangle as students watch.
   - Curl the rectangle to form a cylinder. Have one student help you hold it so you can fasten the edges with clear tape.
   - Show the paper cylinder around so all students can see it clearly from several different angles.
   - Ask students to comment. During this discussion, remove the tape from the construction paper cylinder, flatten it out, and then form and tape it together again.
5  Now label the paper rectangle, the geoblock, and the paper cylinder as two- or three-dimensional.
   •  Show students the two index card labels you made during Activity 2, and read them together.
   •  Invite one student to place the red paper rectangle, the geoblock cylinder, and the paper cylinder beside the appropriate labels.

6  Draw students' attention to the third Shape Pairs Poster, and work with their input to record some of the ways in which a rectangle and a cylinder are alike and some of the ways in which they are different.
   •  Have students name the shapes at the top of the poster, and identify which of the two is two-dimensional and which is three-dimensional.
   •  Ask them to look again at the rectangle and cylinders in the middle of the discussion area and pair-share ideas about how those two shapes are alike and how they're different.
   •  Call on volunteers to share ideas with the class as you record on the chart.
   Encourage students to move beyond color, size, and material to making statements about the shapes rather than the objects. Also, leave some room at the bottom of the poster for later activities.
Activity 5

Circle & Cone

Day 9

1. Have students make predictions about the marker for the day and then ask a student helper to post the marker.

2. Next, pull markers 7 and 8 out of their pockets and place them on a chalk or easel ledge where students can see them very clearly. Explain that you’re going to take a very close look at these two shapes to think about how they’re alike and how they’re different.

3. Have students seat themselves in a circle in the discussion area. Set the yellow construction paper circle and the geoblock cone in the middle of the circle.
   - Have students pair-share observations about these two objects. Then call on volunteers to share with the class.
   - As students share observations, encourage them to speculate about the connection between the circle and the cone. Can they see any way in which the two are related?

4. Show students a copy of the Paper Circle Teacher Master, and use it to make a cone as they watch.
   - Cut out the circle and cut along the dotted line to form a slit from the edge to the center of the circle.
   - Pull one edge of the slit over the other until you have formed a cone, and use a piece of clear tape to fasten it.

5. Now label the circle, the geoblock, and the paper cone as either two- or three-dimensional.
   - Show students the two index card labels you made during Activity 2, and read them together.
   - Invite one student to place the yellow paper circle, the geoblock cone, and the paper cone beside the appropriate labels.

6. Draw students’ attention to the fourth Shape Pairs Poster, and work with their input to record some of the ways in which a circle and a cone are alike, and some of the ways in which they are different.
   - Have students name the shapes at the top of the poster, and identify which of the two is two-dimensional and which is three-dimensional.
• Ask them to look again at the circle and cones in the middle of the discussion area and pair-share ideas about how those two shapes are alike and how they're different.

• Call on volunteers to share ideas with the class as you record on the chart.

Encourage students to move beyond color, size, and material to making statements about the shapes rather than the objects. Also, leave some room at the bottom of the poster for later activities.

```
Alike
• They’re both round. (The cone is round on the bottom.)
• You can make a cone out of a circle.

Different
• The circle is flat; the cone is standing up.
• The circle is two-dimensional. The cone is three-dimensional.
• The cone is pointy at the top.
• The cone can kind of roll, but it goes around in a circle.
```

7 Optional: Right now or at another time of the day, give each student a copy of the Paper Circle Teacher Master. Have them cut out the circle, cut the dotted line to form a slit, and pull the edges together to make a cone.

• Encourage students to experiment with the edges of the slit to form cones of a different height and base circumference. Note with them that the tighter they pull the two edges together, the taller the cone and the smaller the circular base.

• If time allows, let them color their circles before taping them.

You might want to share a book that includes pictures of cones in the environment and discuss some of the things around us that are cone-shaped. Students may decide to color their circle so it resembles an ice-cream cone, a clown hat, a traffic cone, or a snow-cone holder.

• Give each student a piece of clear tape. Have them help one another hold and tape their cones.
Activity 6

Shapes Alive! Day 12

1 Have students make predictions about the marker for the day, and then ask a student helper to post the marker.

2 Next, go back to marker 9 and work forward to marker 16, taking time to discuss each of the objects pictured so far with the class.
   - What is the name and shape of the object?
   - Where would you find this object or one like it?
   - If you saw this object in real life, would it be flat or solid, two-dimensional or three-dimensional? How do you know?

3 As you discuss these calendar markers with the class, record the name of each object at the bottom of the appropriate Shape Pairs Poster.

4 Point to each of the calendar markers, 1–16, and name the shape pictured. Repeat this a second time and have students name the shapes along with you. Pause between each pair to reinforce the relationship between the shapes pictured and help students tune into some of the patterns at work.

   Teacher I’m going to point to each of the markers up through number 16, and say the shape I see. My turn first, and your turn to listen. Square, cube … circle, sphere … rectangle, cylinder … circle, cone, and now it starts again. Square, cube … circle, sphere … rectangle, cylinder … circle, cone. OK, I’m going to do this again. This time, you all say the shape names with me. Ready?
Activity 7

Making the Pattern Strips  

1. Have students make predictions about the marker for the day, and then ask a student helper to post the marker.

2. Next, show students the 3” × 9” strips of white construction paper you cut for this activity and explain that you’re going to work together to make some pattern strips for the November markers.

3. Ask students to find and share, first in pairs and then as a whole group, any patterns they notice in the sequence of markers so far. 
   
   **SUPPORT** Remind students that a *pattern* is something that repeats over and over again, making it possible to predict what’s coming next in a sequence of pictures or words or actions. If necessary, demonstrate with a simple chant, coupled with motions as students watch. After you repeat the sequence several times, break off in the middle and ask students what comes next.

4. Call on a volunteer to share and explain her idea to the class.
   
   - Encourage the student to come up to the Calendar Grid and use the pointer to show as well as describe the pattern she found.
   
   - If there is general agreement, point to at least the first dozen markers on the grid as students verbalize the pattern (e.g., two-dimensional shape, three-dimensional shape; two-dimensional shape, three-dimensional shape).

5. Work with input from students to make a very simple strip for each of the patterns identified.
   
   Post the strips near the Calendar Grid pocket chart, and encourage students to use them in making predictions about upcoming calendar markers if you have more than 15 instructional days in November.
November Calendar Collector
Collecting Sticks

Overview
Each day for the first two weeks this month, a helper spins a spinner numbered 3–5 and collects the designated number of craft sticks to place in the Calendar Collector pocket chart. At the end of each week, students count the sticks to see how many they collected. Then the class lays the sticks end-to-end and cuts a piece of adding machine tape to match the total length of the collection. At the beginning of the third week, students combine both collections, estimate, and then count to see how many sticks they collected in all. They also lay the entire collection of sticks end-to-end to see if their total length matches the length of the adding machine tape strips placed end-to-end.

Skills & Concepts
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Count collections of objects in different ways to demonstrate that the arrangement of objects and the order in which they are counted do not change the total number of objects (K.CC.4b)
- Count up to 20 objects arranged in a line, rectangular array, or circle to answer “how many?” questions (K.CC.5)
- Decompose numbers from 11 to 19 into a group of 10 and some 1s (K.NBT.1)
- Directly compare the lengths of two objects, and describe the differences between their lengths (K.MD.2)
- Reason abstractly and quantitatively (K.MP.2)
- Look for and express regularity in repeated reasoning (K.MP.8)

Materials

<table>
<thead>
<tr>
<th>Activities</th>
<th>Day</th>
<th>Copies</th>
<th>Kit Materials</th>
<th>Classroom Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1 Spinning for Sticks</td>
<td>1, 6</td>
<td></td>
<td>• Calendar Collector pocket chart</td>
<td>• 9” x 12” piece of construction paper</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Calendar Collector Display Cards (Week 1, Week 2, Popsicle Sticks)</td>
<td>• 9” x 12” piece of construction paper</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 3–5 Spinner</td>
<td>• 3” x 5” index card, cut in half, for label cards (see Preparation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Numbers to Ten Counting Mat (several)</td>
<td>• markers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 1 roll adding machine tape</td>
<td>• yardstick or meter stick (optional, for support suggestion)</td>
</tr>
<tr>
<td>Activity 2 Looking at the Weekly Collection Total</td>
<td>5, 10</td>
<td></td>
<td>• Numbers to Ten Counting Mat (several)</td>
<td>• chart paper or writing surface</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 3–5 Spinner</td>
<td>• tray or shallow container</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Numbers to Ten Counting Mat (several)</td>
<td>• blue masking tape</td>
</tr>
<tr>
<td>Activity 3 Estimating &amp; Counting the Month’s Total Collection</td>
<td>11</td>
<td></td>
<td>• Calendar Collector pocket chart</td>
<td>• 9” x 12” piece of construction paper</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Calendar Collector Display Cards (Week 1, Week 2, Popsicle Sticks)</td>
<td>• 9” x 12” piece of construction paper</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 3–5 Spinner</td>
<td>• 3” x 5” index card, cut in half, for label cards (see Preparation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Numbers to Ten Counting Mat (several)</td>
<td>• markers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 1 roll adding machine tape</td>
<td>• yardstick or meter stick (optional, for support suggestion)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Numbers to Ten Counting Mat (several)</td>
<td>• chart paper or writing surface</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 3–5 Spinner</td>
<td>• tray or shallow container</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Numbers to Ten Counting Mat (several)</td>
<td>• blue masking tape</td>
</tr>
</tbody>
</table>

**Note**
If you have more than 15 instructional days in November, you may have time to conduct Activities 1 and 2 three times each instead of twice before you start Activity 3.

**Vocabulary**
An asterisk [*] identifies those terms for which Word Resource Cards are available. collection compare* count* equal* estimate* estimation height* length* long/longer/longest* number words for 1–40 ones* short/shorter/shortest* tens* ten-frame sum or total*
Preparing

Weekly Collection Display
Use the Calendar Collector pocket chart and the Calendar Collector Display Cards to set up the collection display for this month, as shown below. Post it in your Number Corner area and keep a small container of about 60 craft sticks close by.

Label Cards
Prepare two pieces of card stock about the same size as the Week Cards—3" × 5" index cards, cut in half, work well. These fit into the pockets under the Week Cards and will serve as labels for the weekly collection total in Activity 2. If you laminate the label cards and use dry-erase marker to write on them, you can use them again in future months.

Note: If you have more than 15 instructional days in November and plan to conduct Activities 1 and 2 three times each instead of two, label the third pocket.

Mathematical Background
This month’s activities provide opportunities to reinforce a host of different counting skills including instant recognition of small groups, one-to-one correspondence, cardinality, rote counting to 30 or more, and numeral recognition to 5. Activities 2 and 3 also provide opportunities to compare lengths and use key phrases such as shorter than, longer than, and the same length.

Update
For the first two weeks of the month, have a student helper follow this update procedure every day that the Calendar Collector is not a featured activity. You’ll update the Calendar Collector as part of Activities 1 and 2 as well.

Procedure
• Spin the 3–5 Spinner to determine the number of sticks to collect.
• Count out that many sticks onto the five-frame side of a Numbers to Ten Counting Mat as the other students watch.
• Help lead the in class recounting the sticks (possibly more than once—see Activity 1, Step 4) to confirm the quantity.
• Place the day’s sticks in the appropriate weekly collection pocket.
  » By the third week of the month, there will be two separate sets of sticks in the collection chart, one collection in each of the first two large pockets.

Key Questions
Use the following questions and prompts to guide students as they count the sticks collected each day.
• What number did we spin today?
• Let’s count out that number of sticks onto the five-frame side of one of our counting mats.
• If we dump the sticks off the counting mat and onto this piece of paper, will we still have the same number? How do you know?
• If we lay the sticks end-to-end, will we still have the same number? How do you know?
Activity 1

Spinning for Sticks

Days 1, 6

1. Open the first Calendar Collector activity by explaining that the class will collect Popsicle sticks this month. Show students the container of sticks you prepared.

2. Explain that you’re going to use a new spinner this month. Show students the 3–5 Spinner, and ask volunteers to share observations.

3. Have a student helper spin the spinner and get the designated number of sticks out of the container.
   - Select a student to spin the spinner.
   - When the spinner arrow lands, read the numeral with the class.
   - Set a Numbers to Ten Counting Mat on the floor where all the students can see it, five-frame side up, and have the helper count the designated number of sticks onto the mat, setting 1 stick in each box.
   
   *Let the student work at his own pace, but assist if necessary.*

4. Have the class recount the sticks in several different ways to confirm the total.
   - Ask all students to count the sticks on the mat as the helper touches each one. Count with them, and at the end of the count, ask how many sticks there are on the mat.
   - Then place the 9” × 12” sheet of construction paper on the floor next to the counting mat. Tell students you are going to dump the sticks from the mat onto the piece of paper. Will there still be the same number?
   - Gently pour the sticks off the counting mat onto the construction paper and let them remain where they fall rather than arranging them in any way. Ask students if the number of sticks is the same or different. Give them a few moments to consider the question. Then touch and move each stick as the class counts them by 1s.
   - Lay the sticks end-to-end in a line as students watch. Ask them if the number of sticks is the same or different now. Give them a few moments to consider the question, and then point to each stick as the class counts them by 1s.

5. Have the student helper place the sticks in the appropriate pocket on the Calendar Collector pocket chart.
Activity 2

Looking at the Weekly Collection Total  

Days 5, 10

1. After completing the update procedure, let students know it’s time to find out how many sticks they collected over the past few days.
   - Lay the sheet of construction paper out on the floor.
   - As they watch, take all the sticks out of the pocket for the week just completed, and place them in a heap on the construction paper.

2. Work with students to count the sticks.
   - Give students a few moments to examine the pile of sticks quietly.
   - Then set a Numbers to Ten Counting Mat out on the floor beside the construction paper, ten-frame side up. Count the boxes on the mat with students, and ask if they think there are enough sticks in the pile to fill each of the boxes.
   - Have students count with you as you move each of the sticks from the pile on the construction paper onto the counting mat. When you fill seven or eight boxes, ask students whether you’ll need another mat to finish counting all the sticks. Call on several volunteers to share their thinking with the class, and encourage them to explain their reasoning.

3. Continue counting the sticks onto the mat with the class. When you fill one mat, get a second mat and continue. Use a third mat if needed.

4. When you finish, model how to count the collection by 10s and 1s. Then have students join you in counting the sticks by 10s and 1s, and finally by 1s.
   - Circle the full mat with your finger and review the fact that there are 10 on that mat.
   - Model counting on from 10 to get the total (e.g., 10 … 11, 12, 13, 14, 15, 16, 17, 18) as you circle the full mat with your finger and then point to each of the single sticks on the other mat.
   - Have students count with you as you circle and count on a second time.
   - Finally, recount the sticks by 1s with the class.

   While recounting the sticks by 1s may seem to undercut the act of counting them as 10 and some more, it actually helps students develop trust in more sophisticated counting strategies when they discover that both methods yield the same answer.
Now explain that before you put the sticks back in the Calendar Collector pocket, you’re going to have some students lay them end-to-end on the floor to see how far they stretch.

Before doing so, ask students to make a couple of predictions.

- Place one stick at the edge of the discussion circle, in front of one student. Ask students if they think the line of sticks will extend all the way across the discussion circle. Will it extend beyond the discussion circle?
- When all the sticks are laid end-to-end, will the line be longer than the length of a student lying on the floor?

After some discussion, call on several students to help lay all the sticks in the collection end-to-end.

Ask the rest of the students to watch very carefully to make sure their classmates are lining up the sticks without any gaps or overlaps, setting them carefully end-to-end.

**SUPPORT** Hold a yardstick or meter stick on the floor and have students line up the craft sticks alongside the longer stick. You will have to move the yardstick each time they lay down 8 of the craft sticks, but the longer stick will give them something to butt the craft sticks up against, and make the task a little easier for them. When they finish lining up the whole collection, you can remove the yardstick entirely.

When the sticks are all lined up, ask students to pair-share ideas about the length of the collection. Is the line of sticks longer than one of them? Two or three of them?

Select a student to lie down on the floor with his heels next to the first stick. Select a second and even a third student to join the first if necessary.

*Darya* Look! Even two kids together aren’t as long as the sticks!

*Teacher* Is there room for another student along the line of sticks?
Damon: No! That’s silly! It would have to be someone really, really short, like only as tall as one stick!

Teacher: So, we can say that our line of 18 sticks is about the same length as 2 students?

Students: Yep!

8 Have these students take their places in the circle, and choose another student to help you unroll and cut a length of measuring tape to match the length of the sticks.

- Model good measuring techniques, such as making sure that the adding machine tape starts evenly with the first stick, and using precision as you work.
- Use and reinforce such phrases as shorter than, longer than, exactly the same length as you unroll and cut the adding machine tape.
- Label the strip of adding machine tape with the week number (Week 1 at the end of the first week, Week 2 at the end of the second week), and hang it on or near the Number Corner display.

If you hang the strip in an accessible location with one end touching the floor, some students may enjoy comparing their own height to the length of the strip by standing up next to it during the coming week.

9 Finally, write the number of sticks on one of your prepared label cards, and read it with the class.

10 Then have a student helper gather all the sticks, put them back in the correct pocket, and post the card below that pocket on the Calendar Collector pocket chart.

By the end of the second week, you will have two labeled collections of sticks in the Calendar Collection chart and two strips of adding machine tape hanging on the wall.

**CHALLENGE** When you conduct this activity at the end of the second week, lay the sticks end-to-end and cut a length of adding machine tape to match before students count the sticks. Lay the strip from the first week alongside the one you just cut, and compare their lengths. Then invite students to use the information to estimate the number of sticks in this week’s collection. Have them consider the following questions:

- Is this length of adding machine tape shorter than, longer than, or the same as the strip we cut last week?
- How many sticks long was the first strip we cut?
- Can you use that information to make an accurate estimate of the number of sticks we’ll have in our collection this week?

Then have students count the sticks with you to confirm their estimates.
Activity 3

Estimating & Counting the Month’s Total Collection  Day 11

1. Draw students’ attention to the Calendar Collector pocket chart, with its labeled collection of sticks for each of the first two weeks of the month.

Point to each of the labels and read the number with the class.

2. Explain that it’s time to find out how many sticks the class collected for the whole month.
   - Take the sticks out of both pockets, and place them on a tray or other shallow container.
   - Move the tray around the group so all students get a quick close-up look at the collection.
   - Ask students to turn to the person sitting next to them and whisper how many sticks they think there are on the tray.

3. Call on students to share their estimates, and write them on the board or a piece of chart paper. As you write, say each number name.
   - Call on students quickly until everyone who wants to share has had a turn. It is fine if a student chooses to pass. Collect their estimates quickly so the group doesn’t lose interest.
   - If a student says a number that is already written, draw a line under it to indicate that another person also chose this number.

   How many sticks do you think there are?

   50 40 25 15
   60 36 30 42
Work with students to count the sticks.
- Set one of the Numbers to Ten Counting Mats, ten-frame side up, next to the tray on the floor.
- Move the sticks one by one from the tray to the mat, counting with the students as you go.
- Stop after the first mat is filled, and ask students if they think there are enough sticks left on the tray to fill another ten-frame.
- Set a second mat next to the first, and keep moving the sticks and counting with the class, continuing on from 10.

**CHALLENGE** Stop when you fill two mats and ask students whether they can eliminate any of the estimates you recorded earlier. Also invite them to make new estimates, and record those on the chart in a different color.

Continue to count, adding new mats as needed. When you count all the sticks with the class, ask students how many there are total. Then go back and recount the collection with the class by 10s and 1s.

When you count by 10s and 1s, circle each of the full mats with your finger, and then point to each of the single sticks on the last mat. Have students watch and listen the first time, and then count with you the second time, making a circle in the air with one finger for each 10, and clapping on each of the 1s.

Now take the two strips of measuring tape down. Place them side-by-side on the floor and ask students to compare the two lengths. Which strip is longer? Which is shorter?

Then have a couple of students help you lay the strips end-to-end. *Use small pieces of blue masking tape to secure the strips to the floor if necessary.*

Explain that you're going to choose some students to lay out all the sticks in the entire collection next to the adding machine tape. Ask them to pair-share ideas about how the length of the stick collection will compare to the adding machine tape—will the collection of sticks be shorter than, longer than, or the same length as the adding machine tape? How do they know?

Invite several students to share their thinking with the class. Then choose several more students to lay the sticks out very carefully on the floor alongside the adding machine tape.

*You can involve more students if you call on two or three to start the process and have them sit down about halfway through, inviting two or three more students to finish the job.*

Ask students to discuss the results.
- Did the length of the stick collection turn out to be shorter than, longer than, or the same as the adding machine tape?
- Why did it turn out that way?
- How many sticks long is the length of adding machine tape? How do they know?

Finally, recount the entire collection one by one with the class as you (or a student) pick(s) the sticks up off the floor. Post the total amount, along with the stick collection itself and the strips of adding machine tape, near the Number Corner display.
November Days in School

drawing to make ten

overview

the days in school workout continues as a short daily routine for most days this month. on the three days when the workout is targeted as a focus of instruction, students use sketches and numbers to solve and show their thinking in response to the following problem: there are ___ dots on the ten-frame on display. how many more dots do we need to make 10?

Skills & Concepts

• Count within 100 by 1s and 10s (K.CC.1)
• Read numbers from 0 to 20 (supports K.CC)
• Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
• Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
• For any number from 1 to 9, find the number that makes 10 when added to that number (K.OA.4)
• Make sense of problems and persevere in solving them (K.MP.1)
• Construct viable arguments and critique the reasoning of others (K.MP.3)
• Look for and make use of structure (K.MP.7)

Materials

<table>
<thead>
<tr>
<th>Activities</th>
<th>Day</th>
<th>Copies</th>
<th>Kit Materials</th>
<th>Classroom Materials</th>
</tr>
</thead>
</table>
| Activity 1                 | 3, 8, 13 | TM T9 Ten-Frames (from September) | • Finger Pattern Display Cards, 1–10  
• plastic links (10 or more in each of 2 different colors)  
• Numbers to Ten Counting Mats (available as needed) | • student whiteboards, markers, and erasers (class set)  
• Unifix cubes in stacks of 10, 5 of one color and 5 of another (available as needed)  
• ½" adhesive dots in 2 different colors  
• Classroom Number Line sentence strips (prepared in September)  
• Chain-Link Measuring Strip (prepared in October)  
• black erasable markers  
• pointer |

TM – Teacher Master, NCSB – Number Corner Student Book
Copy instructions are located at the top of each teacher master.

preparation

Filled Frames, Completed Chains, and the Classroom Number Line

If you and your students completed a ten-frame and a chain of 10 links at the end of October, move them to the side, along with all the rest of the completed frames and chains. If you still have a ten-frame and chain to complete from the previous month, leave them posted on the Number Corner display until they’re finished and then move them. Add new sentence strips to the Classroom Number Line as needed. (You’ll probably be on your fourth or fifth strip at the start of November, depending on how many instructional days you had in September and October.

Dots and Links for This Month

If you started a new ten-frame toward the end of October, or will just be starting a new one on the first instructional day in November, display the new or partly filled frame in a prominent location on the Number Corner display board, alongside the Chain-Link Measuring Strip from last month.
Mathematical Background

One of the important things we do as teachers is to help students learn to represent their mathematical thinking with sketches, numbers, and words. This early in the kindergarten year, it is reasonable to ask students to use sketches to solve problems and show their thinking. The problem associated with the Days in School workout this month is the same as last: how many more dots (or links) to make 10? This is a "real" problem for young students, in the sense that there is no easy and obvious solution path. As such, the situation will generate a variety of strategies, all of which will help you learn more about your students.

In the chart below, are six different responses to the following problem: There are 4 dots on the ten-frame today. How many more dots do we need to fill the whole frame—how many more to make 10? Each of the responses is typical of kindergartners, and each provides windows into students’ thinking if we know what to look for.

<table>
<thead>
<tr>
<th>Response</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Response 1" /></td>
<td>This student attempts to draw 10 dots in response to the problem, but counts incorrectly and only draws 9. Although the student hasn’t made much progress toward solving the problem, he has responded by attempting to draw 10 dots, which means he has some understanding of the situation.</td>
</tr>
<tr>
<td><img src="image2.png" alt="Response 2" /></td>
<td>This student draws 10 dots in response to the problem, but doesn’t know where to go from there. The teacher learns that this student can count to 10 with good one-to-one correspondence, even though he can’t move forward from there to solve the problem.</td>
</tr>
<tr>
<td><img src="image3.png" alt="Response 3" /></td>
<td>This student also draws 10 dots, but then circles the first 4 and counts the remaining dots to determine that it requires 6 more to make a total of 10.</td>
</tr>
<tr>
<td><img src="image4.png" alt="Response 4" /></td>
<td>This student’s strategy is similar to the one shown directly above. The student has drawn 10 tally marks, circled 4 to represent the dots already on the ten-frame, and then counted the remaining 6, numbering each as it’s counted to find the answer.</td>
</tr>
<tr>
<td><img src="image5.png" alt="Response 5" /></td>
<td>This is another variation of the strategy just described. Here, the student has written the numbers from 1 to 10, and circled the first 4 because there are 4 dots already on the ten-frame. Then she has counted the remaining numbers, marking each one off with a check as she goes, and finally recorded the answer, 6. This response indicates a high level of organization, as well as good counting and numeral writing skills.</td>
</tr>
<tr>
<td><img src="image6.png" alt="Response 6" /></td>
<td>In this deceptively simple response, the student has the quantity 4 firmly planted in mind, and then counts on to find out how many more are needed to make a total of 10. This is the type of response you might see from a student with strong mathematical intelligence—elegant and straightforward.</td>
</tr>
</tbody>
</table>

Key Questions

Use the questions below this month as students continue to develop basic counting skills as well as a good sense of 10.

- How many dots did we have on the ten-frame yesterday? Can you show with your fingers? How did you count the dots?
- How many dots will we have on the ten-frame after we add the dot for today? How do you know?
- How many more dots do we need to add to the ten-frame to complete the first row of 5? How many more to fill every box on the frame to 10? How do you know?
- How many links did we have in our chain yesterday? Can you show with your fingers? Let’s count to check.
- How many links will we have in the chain after we add 1 for today? How do you know?
- How many more links do we need to add to our chain to make a group of 5? How many more to make a group of 10? How do you know?
- How many dots (links) do we have in all if we count our finished ten-frames (completed chains) by 10s, and then count the dots (links) we’re collecting right now by 1s?
- What number do we need to write on our Classroom Number Line today? What does that number tell us? (How many days we’ve been in school.)
Update

Follow this update procedure with the class every school day except for the days on which Days in School is one of the featured activities.

Procedure

• Draw students’ attention to the ten-frame currently on display, and ask them to show on their fingers how many dots there will be after the one for today is added.
• Have the student helper add a new dot to the ten-frame, and point to each dot as the class counts to confirm the new total.
• Repeat the same actions with the links in the chain.
• Ask students how many more dots are needed to fill the frame for a total of 10, and give them a few moments to find the answer. Then call on several students to give their answer and explain how they figured it out. (This can be done with the dots on the ten-frame some days, and with the links on the measuring strip on other days.)
• Ask the class to determine how many days they have been in school by counting the dots in the filled frames by 10s and the dots on the current frame by 1s. (Students can count the links instead of the dots some days.)
• Record the number on the Classroom Number Line.

Note

If time allows some days, have students count all the dots or all the links in the whole collection one by one to reconfirm the total. This is one way to help them learn to understand and trust the shortcut we take when we count a quantity by 10s and 1s.

When you fill the first ten-frame and complete the first chain of 10 for the month, move the frame and the chain off to the side with the rest of the filled frames and completed chains. Post a new, empty ten-frame on the display board. However, leave the Chain-Link Measuring Strip in place, and use it as a mat on which to build the next chain of 10 links.

Activity 1

Drawing to Make Ten

Days 3, 8, 13

1 Have students each pick up a whiteboard, marker, and eraser on their way to the Number Corner discussion area.

2 When all students are seated in the discussion area, explain that you are going to have them use pictures and numbers on their whiteboards to solve a problem in a few minutes.

3 Draw students’ attention to the ten-frame currently on display, and ask them to show on their fingers how many dots there will be after the one for today is added.

4 Have your student helper add a new dot to the ten-frame, and point to each dot as the class counts to confirm the new total.

5 Repeat steps 3 and 4 with the chain of plastic links.

6 Then ask students how many more dots it will take to fill the entire ten-frame, to make a total of 10.
   • Give them a little time to consider the problem and talk with the people sitting next to them.
• Then ask them to use pictures or numbers on their whiteboards to solve the problem and show their thinking.

**SUPPORT** If some students are not sure what to do, you might visit with the class to see if anyone can suggest a way to get started, or make a few suggestions on your own. Avoid giving students specific methods for solving the problem, however, even though some of them might not be able to do much with the situation yet. Rest assured they will learn from one another and develop strategies for solving such problems even if they don’t get it the first time around.

*Teacher* I see some of you looking kind of puzzled, as if you’re not quite sure what to write on your whiteboards. We all agree that there are 4 dots on the ten-frame today. What could you draw or write on your board to show how many more we need to make 10 and fill the whole frame?

*Hunter* I know it’s 6. I can see it up there. But I don’t know what to put!

*Teacher* Could you write a number and draw some dots to show how you figured it out?

*Hunter* Can we make sticks instead of dots?

*Teacher* Sure!

*Tyrone* I don’t know how to make a 6.

*Teacher* Where can you look in the room to find out how to write the numbers you need?

*Students* On the calendar!
On those finger cards!

**SUPPORT** You can also make counting mats and Unifix cubes available to students who want to use them. Encourage these students to use the manipulatives to help solve the problem, and then find some way to show their thinking on their whiteboard.

7 Give students a reasonable amount of time to work.

• Circulate as they are working to provide support as needed.

• Encourage students who are feeling stuck to look around at their neighbors to see what they are writing and drawing on their whiteboards.

• If some students simply write the answer (6 in this case), press them to use dots, lines, or other numbers to show how they solved the problem.

• Be prepared to move along after about 5 minutes, even if some students haven’t been able to do much with the problem.

8 As students finish, have them share their work with the people sitting nearest them. Then call on two or three volunteers to share their work with the class.

• Have the volunteers come up, one by one, to the front of the class to share their work.

• When each student comes up, hold her whiteboard so she is free to point to her drawings and numbers as she explains her work.

*Student A* First I made 4 lines for the dots we already have. I put a circle around them, see? Then I kept going til I had 10 lines. Then I counted them. It’s 6.
Teacher  So you’re saying that as soon as we’ve collected 6 more dots, the ten-frame will be full?

Aja  Yes.

Teacher  Let’s have someone else who’s willing to share your work with us.

Micah  I knew it was 6 because there are 6 empty boxes up there. So I thought about 4, and kept counting up to 10. I made a stick every time. It was 6.

Finally, work with the students to determine how many dots and how many links they collected so far. Record the result on the Classroom Number Line to show how many days you’ve been in school.

- Use your pointer to circle each of the full frames as you count the dots on each by 10s. Then point to the dot(s) on the new frame and continue the count by 1s.
- Repeat these actions, and have students join you this time. Have them make a circle in the air for each set of 10, and clap on the 1s.

Teacher  10, 20, 30, 40, 41, 42, 43, 44! Count with me this time. Make a circle in the air for each 10, just like I’m using the pointer to make a circle around each of the full ten-frames. Then clap when we count the dot on our new frame. Ready?

Students and Teacher  10, 20, 30, 40, 41, 42, 43, 44!

- Repeat with the chains and the link(s).
- Record the number on the Classroom Number Line.
November Computational Fluency  
Combinations of Five

Overview
The class plays two different games to develop fluency with pairs of numbers whose sum is 5.

Skills & Concepts
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Given a number from 1–5, count out that many objects (K.CC.5)
- Recognize the number of objects in a collection of 6 or fewer, arranged in any configuration (supports K.CC)
- Decompose the number 5 into pairs in more than one way and represent those decompositions with a model (K.OA.3)
- Reason abstractly and quantitatively (K.MP.2)
- Look for and express regularity in repeated reasoning (K.MP.8)

Materials

<table>
<thead>
<tr>
<th>Activities</th>
<th>Day</th>
<th>Copies</th>
<th>Kit Materials</th>
<th>Classroom Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1</td>
<td>2, 6, 12</td>
<td></td>
<td>Numbers to Ten Counting Mats (1)</td>
<td>small drinking cup</td>
</tr>
<tr>
<td>Spill the Beans</td>
<td></td>
<td></td>
<td>5 bean counters</td>
<td></td>
</tr>
<tr>
<td>Activity 2</td>
<td>7, 11, 15</td>
<td></td>
<td>Numbers to Ten Counting Mats (1 per student, plus 1 for display)</td>
<td>5 Unifix cubes per student, plus 5 for display</td>
</tr>
<tr>
<td>Plunk It</td>
<td></td>
<td></td>
<td></td>
<td>student whiteboards, markers, and erasers (class set, optional, challenge suggestion)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>small drinking cup</td>
</tr>
</tbody>
</table>

TM – Teacher Master, NCSB – Number Corner Student Book
Copy instructions are located at the top of each teacher master.

Mathematical Background
The class works with 5 plastic bean counters, each of which has a red side and a white side. Each time the beans are spilled in the game of Spill the Beans, some come up white and some come up red, but the total is always 5. Repeating this game gives students the chance to see that there are three different pairs of whole numbers with a sum of 5: 0 and 5; 1 and 4; and 2 and 3. We refer to these as “combinations of 5.” Many students will begin to recognize the parts of these combinations automatically, that is, subitize them. For example, they will recognize automatically that there are 3 red and 2 white beans in the combination below, without having to count them by 1s.

In Plunk It, students keep count mentally as they hear the sound of cubes “plunked” into a cup. They then represent the quantity with finger patterns or by counting out a certain number of cubes. Students who need to can keep count using their fingers, but the activity is designed to help students count mentally as each cube is “plunked.”

Vocabulary
An asterisk [*] identifies those terms for which Word Resource Cards are available.

- add*
- combination(s)
- count*
- equation*
- number words for 0–5
- sum or total*
Activity 1

Spill the Beans

Days 2, 6, 12

1. Gather the class in the Number Corner area, and display the five-frame side of the Numbers to Ten Counting Mat.

2. Introduce the bean counters.
   - Set out the 5 bean counters, white side up.
   - Turn each one over to show students that each bean is white on one side and red on the other.
   - Then put the beans in a cup.

   SUPPORT Invite students to count with you as you put each bean in the cup one at a time. Hearing the "plunk" of each bean as they count will reinforce one-to-one correspondence, that is, the idea that each bean is counted just once with a unique number name. Then spill the beans out of the cup and ask students how many beans are there. Students who have a sense of cardinality will instantly report that there are 5 beans (because you just counted them), while those who don’t will count the beans one by one again. Watch to see which students report the total instantly and which ones have to count them again.

3. Ask a student helper to come and help you get the game of Spill the Beans started by shaking the cup and then gently spilling out the beans.
   - Have the student put one hand over the opening of the cup and shake it.
   - Next, pause for a moment and ask students to think silently and then tell the person next to them what will happen when the student helper spills the beans out of the cup. How many beans will come out of the cup? What color will they see?
   - Ask the student to spill the beans gently out of the cup.

4. Ask students to think silently to themselves about how many red beans they see and how many white beans they see.

5. Then have the student helper group all the red beans together and all the white beans together.

6. Ask students to think quietly about how many white and red beans they see now.

   You might ask them to consider whether it is easier to tell how many there are of each color now that they are grouped together.

   CHALLENGE If students seem able to determine how many red and white beans there are immediately in step 4, skip steps 5 and 6 when you repeat this activity, and instead ask them to share what combinations they see (1 red bean here and another over there makes 2 red beans, and then 3 white).

7. Arrange the red and white beans in the five-frame. As you do, have students count the number of beans in each group with you (e.g., 1, 2 red beans and 1, 2, 3 white beans).
When you are done counting, ask students how many beans there are in all. You might ask them to hold up a finger pattern to show and then ask everyone to say the number name (five) together.

Repeat the game as time allows.

Consider using the following suggestions to make the game more challenging as you repeat it toward the end of the month.

**CHALLENGE** Write an equation to show each combination. For example, if you have 3 red and 2 white beans, you would write 3 + 2 = 5 and explain that this means that 3 red beans plus 2 white beans are 5 beans in all. You can also write 5 = 3 + 2 and explain that we know we always have 5 beans, so we can start with that number and then show the 3 red and 2 white with the 3 + 2.

**CHALLENGE** Give each pair of students 5 bean counters and ask them to figure out how many different ways they can make 5 beans using some red and some white.

---

**Activity 2**

**Plunk It**

Days 7, 11, 15

*Place a small drinking cup, a Numbers to Ten Counting Mat, and 5 Unifix cubes at the display before you conduct this activity.*

1. Give each student a Numbers to Ten Counting Mat and 5 Unifix cubes, and ask them to turn their mats so the five-frame side is showing.

2. Explain how to play Plunk It.
   - Students listen silently while you drop some cubes into the cup one at a time.
   - They should listen carefully to keep track of how many cubes you place in the cup.
   - Then they count out that number of cubes and place them on their counting mats.

   - Then a volunteer comes to the display, pours the cubes out of the cup, and arranges them on the display counting mat.
   - Students count the cubes to confirm that the number of cubes on their own mats matches the number of cubes you actually put in the cup.
SUPPORT Invite students to use their fingers to keep track of the cubes as you drop them in the cup. Slow down if students seem to need a little more time.

CHALLENGE Speed up the rate at which you drop the cubes in the cup, and ask students to keep count mentally. You could ask them to write the numeral they think is the final count on a student whiteboard.

3 Play as many rounds of Plunk It as time allows.

4 Consider using the following variation of the game to emphasize combinations of 5.
   - Students listen silently while you drop some cubes into the cup one at a time.
   - They should listen carefully to keep track of how many cubes you place in the cup.
   - Then they count out that number of cubes in a single color and place them on their counting mats.
   - Ask them how many more cubes they need to make 5.
   - Then they fill in the rest of the counting mat with cubes in a second color to make 5.
   - Each student holds up finger patterns to show how many cubes they have in each color.

5 Consider using the following variation of the game to have students consider “one more than” and “one less than.”
   - Students listen silently while you drop some cubes into the cup one at a time.
   - They should listen carefully to keep track of how many cubes you place in the cup.
   - Then they show, using a finger pattern, how many cubes would be in the cup if you dropped 1 more in (or took 1 away).
   - Pour out the cubes and add 1 more (or subtract 1) to the collection to confirm the answer.
November Number Line
Numbers Before & After

Overview
This month students count forward and backward from 1 to 25. They are introduced to Hop High, Count Low, a movement activity that reinforces the backward number word sequence. Students play the Before & After Game to practice identifying numbers that come before and after a given number. Numeral writing is reinforced with three Student Book practice pages.

Skills & Concepts
• Count to 25 by 1s (K.CC.1)
• Count backward from any number in the range of 25 to 1 (supports K.CC)
• Count forward from a given number, rather than starting at 1 (K.CC.2)
• Write numbers from 0 to 10 (K.CC.3)
• Read numbers from 0 to 25 (supports K.CC)
• Demonstrate that each successive number name refers to a quantity that is one larger than the previous number name (K.CC.4c)
• Locate numbers from 0–20 on a number line (supports K.CC)
• Describe the relative positions of objects in the environment using the terms before, after, and between (K.G.1)
• Look for and make use of structure (K.MP 7)
• Look for and express regularity in repeated reasoning (K.MP 8)

Materials

<table>
<thead>
<tr>
<th>Activities</th>
<th>Day</th>
<th>Copies</th>
<th>Kit Materials</th>
<th>Classroom Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1 Playing the Before &amp; After Game</td>
<td>3, 9, 13</td>
<td></td>
<td>• Number Line pocket chart</td>
<td>• standard pocket chart</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Number Line Display Cards 1–25 (see Preparation)</td>
<td>• grasshopper pointer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Numeral Writing Rhymes (from September and October)</td>
<td></td>
</tr>
<tr>
<td>Activity 2 Playing Hop High, Count Low</td>
<td>4, 14</td>
<td></td>
<td>• Number Line pocket chart</td>
<td>• grasshopper pointer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Number Line Display Cards 1–20</td>
<td></td>
</tr>
<tr>
<td>Activity 3 Writing Numbers Pages</td>
<td>5, 10, 15</td>
<td>SB 5–7*</td>
<td>Writing Numbers 1 &amp; 2 Writing Numbers 3 &amp; 4 Writing Numbers 5 &amp; 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TM T10–14 Numeral Writing Rhymes (from September and October)</td>
<td></td>
</tr>
<tr>
<td>Activity 4 What’s Behind the Red Door?</td>
<td>7</td>
<td></td>
<td>• Number Line pocket chart</td>
<td>• grasshopper pointer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Number Line Display Cards 6–25 (see Preparation)</td>
<td></td>
</tr>
</tbody>
</table>

Vocabulary
An asterisk [*] identifies those terms for which Word Resource Cards are available.

after*, backward, before*, between*, count*, choral count, digit*, forward, higher, identify, larger, lower, number*, number words for 1–25 numeral, ones family, smaller, teens family, twenties family

Copy instructions are located at the top of each teacher master. * Run 1 copy of this page for display.
Preparation

Number Line Pocket Chart
Prior to Activity 1, make sure the Number Line pocket chart has the numbers 1–20 in order. Cover each of the numbers 1–9 and 11–19 with a blue card. The numbers 10 and 20 are covered with red cards that serve as reference points for students.

Prior to Activity 4, place the numbers 6–25 in the Number Line pocket chart in order. Cover the numbers 6–9, 11–19, and 21–25 with blue cards. Cover numbers 10 and 20 with red cards.

Numerals to Ten and Ten & More Numerals Display Cards
Prior to Activity 1, locate your Numerals to Ten Display Cards and your Ten & More Numerals Display Cards in your Number Corner Kit. Find cards 5, 7, 9, 12, 14, 16, and 18, and set the rest of the cards from both sets aside for now. You will use some of the cards you just set aside later this month.

Mathematical Background
Knowing the forward and backward number word sequences is important to developing many number skills and concepts. Students should work on counting backward at the same time that they are learning to count forward. As in counting forward, students should learn to count backward from any point in the number continuum.

While many students quickly learn to count forward by rote, counting backward is initially more difficult. When counting backward, students must focus on crossing the decade numbers (e.g., 21, 20, 19 or 51, 50, 49), which helps develop an understanding of the place value structure of numbers.

Two important skills for successful forward and backward counting are identifying the number word that comes directly before or directly after a given number. Both are practiced in this month’s Number Line activities. These skills, along with counting forward and backward on the number line, set the stage for using the strategies of counting on to add and counting back to subtract.
Activity 1

Playing the Before & After Game  
Days 3, 9, 13

Place the numbers 1–20 in the Number Line pocket chart. Lift the blue cards and the red card covering the 10 to reveal the numbers as shown. Card 20 should remain hidden under the red card. Place cards 5, 7, 9, 11, 12, 14, 16 and 18 from your Numerals to Ten and your Ten & More Numerals Display Cards face-up in your standard pocket chart.

1. Explain to the class that today they will play the Before & After numbers game.

2. Ask students to pair-share what they notice about the Number Line pocket chart, and call on a few students to share their observations with the class.

3. Discuss with students what the number after means, and practice the concept.
   - Explain that you are going count forward and when you stop counting you would like the class to say the next number.
   - Count from 1–5 and listen for students to say, “6!”
   - Explain that 6 is the number that comes after 5.
   - Repeat with a couple of more examples as needed.

4. Direct students’ attention to the Numerals Display Cards in your standard pocket chart.
   Explain that the numbers shown on these cards are the same as some of the numbers hidden in the Number Line pocket chart.

5. Tell students that they are going to play a game where you will say the name of a number showing on the Number Line pocket chart, and they are to find the number that comes after this number on one of the cards in the standard pocket chart.

6. Explain the directions for the Before & After Game to the class.
   - First you will point to a number in the Number Line pocket chart and say its name.
   - Students are to quietly think in their minds the number that comes after this number.
   - Remind students that if they are thinking quietly, this means they will not call out the number.
   - When students spy the number in the standard pocket chart, they are to give a thumbs up.
   - Then you will choose a student to name the number after your number and lift the card to check.

7. Play the first round of the game with students.
   - Point to and name one of the numbers revealed in the Number Line pocket chart.
• Then point to the number hidden under the blue card that comes directly after the number you just named, and ask students to quietly think of the number that comes after your number and find it with their eyes on one of the displayed cards in the standard pocket chart.

8 On a signal such as a clap, have the class name the number that comes after your number, and then choose a student helper to find the Numeral Display Card in the standard pocket chart.

**SUPPORT** If students are having a lot of difficulty naming the number after a given number, you may need to drop back a few numbers and count forward, asking them to name the next number as modeled in Step 3.

**SUPPORT** Listen for students who may continue to confuse the teen number names with decade number names—for example, saying that “sixty” comes after 15 instead of “sixteen.” You may need to provide some additional support in learning the teens number names.

9 Invite the student helper to lift the card on the pocket with the number after your number. What number is revealed? Does it match the number selected from the pocket chart? After confirming the match, close the card.

10 Continue pointing to and naming numbers revealed on the Number Line pocket chart and asking students to find the number that comes after that number as explained in steps 7–9.

11 Once all the numbers after are found for the open card numbers, explain to the class that you will play again, but this time you are looking for the number that comes before the number you say.

**SUPPORT** If students have a lot of difficulty naming the number after, do not move on to finding and naming the number that comes before a given number during today’s activity. Continue to practice naming numbers after for the next few days and move to numbers before next time the Before & After game is played.

12 Discuss with students what the number before means, and then model and practice the concept.

• Explain to the class that you are going count forward from 1 to 6, and they need to listen closely for the number you say before 6.

• Count from 1 to 6.
• Explain that 5 is the number that comes before 6.
• Next, tell the class you are going to count to 8, and they need to listen for the number that comes before 8.
• Count from 1 to 8.
• Ask the class to name the number you said before 8 and confirm that 7 comes before 8.
• Repeat with a couple of more examples as needed.

13 Play the before part of the game with students.
• Point to and name one of the numbers revealed in the Number Line pocket chart.
• Ask students to quietly think of the number that comes before your number and find it with their eyes on one of the displayed numeral cards.
• Point to the pocket that is before the number you name and remind students this is the number they are finding.

14 Continue naming numbers revealed on the Number Line pocket chart and asking students to find the number that comes before that number as explained for the number after in steps 8–9.

SUPPORT Some students may need to drop back and count forward to name the number that comes before a number. For example, if students are asked to name the number that comes before 12, they may need to count, “10, 11, 12” and then say, “11.”

SUPPORT If students confuse before and after, consider lining up 3 or 4 students to practice the concepts. Choose one of the middle students from the line and ask who is standing before and who is standing after this student. Once students are able to do this successfully, give each student in the line a card with a number on it, and ask students to identify the number before and the number after the number held by one of the middle students.

15 Once all of the numbers before are identified, end this part of the Number Corner Session by asking students to choral count forward and backward from 1 to 19 while you point to the pockets and revealed numbers in the Number Line pocket chart.

16 When you repeat this activity later in the month, choose a different set of cards to display in the 6–20 range.

Activity 2

Playing Hop High, Count Low

1 Begin the activity by hopping your grasshopper pointer up and down vertically.
   • Explain to students that grasshoppers have very strong hind legs. These legs have powerful muscles that help them hop to great heights.
   • Tell students that today they will pretend to hop high like a grasshopper as they practice counting backward.

2 Explain the directions for playing Hop High, Count Low.
   • First, students hop and raise their hands high above their heads and say the number they are starting on for their backward count.
   • They gradually lower their hands as they count backward, and touch the floor on their stop number.
   • They need to think about lowering their hands slowly, but not too slowly, so that they land with their hands on the floor at the end of the count.
Model for the class counting backward from 10 to 1 while lowering your hands from above your head on 10 to touching the floor on 1.

Invite students to hop high into the air, raising their hands way above their heads and keeping them raised until they begin counting backward, gradually lowering their hands to the floor.

Play again using different stop and start numbers in the appropriate counting range for your students.

**CHALLENGE** As you play, ask students to think about where their hands would be for various numbers. This helps them develop a feel for number relationships.

*Teacher* If we count backward from 20 down to 1, about what number will I say at my shoulders? (hands at shoulders). What number will I say at my waist? (hands at waist). What number will I say at my knees? (hands at knees). What number will I say when I touch the floor? (hands touching floor).

On future days, try a variation of this activity using the Number Line pocket chart.

- Start with all the cards down.
- Choose a student helper to open any two cards that are not next to each other on the Number Line pocket chart.
- With students’ help, determine the higher (or larger number) as the start number for counting backward.
- Next, determine the lower (or smaller) stop number.
- Students start with their hands up high in the air and count backward moving their hands gradually lower until they reach the ground at the stop number.

Consider playing Hop High, Count Low after coming in from recess, as you transition from one lesson to the next, or when you have just a few minutes left in a period.
Activity 3

Writing Numbers Pages

On Day 5, students practice writing the numerals 1 and 2. You will need the prepared Numeral Writing Rhymes for 1 and 2. On Day 10, you will need the rhyme posters for 3 and 4, and on Day 15, posters for 5 and 6.

Have students sit at their desks or table spots for this activity. They will each need their Number Corner Student Book and a pencil.

1. Introduce the activity by explaining that students are going to practice saying their number rhymes and writing the numerals 1 and 2 on a page in their Number Corner Student Book.

2. Show students the Numeral Writing Rhymes Poster for 1 and invite students to write the numeral in the air as they say the rhyme with you. You will need to turn your back so the students see you form the numeral correctly.

3. Display your copy of the Writing Numbers 1 & 2 page for all the students to see, and ask them to open their Number Corner Student Books to the same page.

   Ask students to put their finger on the ten-frame at the top of the page showing one dot and quickly scan the class to make sure all of the students are on the correct page.

4. Next, read the rhyme on the page and trace the numeral 1 next to the rhyme with your fingertip.

   Do this a second time, and have students join you.

5. Model for students how to trace the row of numerals with a pencil.

6. Then ask students to trace the row of numbers on their own while you monitor and assist as necessary.

7. Repeat steps 4–6 with the second numeral shown on the page.

8. On Day 10, repeat this activity using the Number Corner Student Book page for numerals 3 and 4, and on Day 15, use the page that practices numerals 5 and 6.
**Activity 4**

**What’s Behind the Red Door?**

*Day 7*

Post numbers 6–25 in the Number Line pocket chart. Hide cards 10 and 20 under red cards. Cover the remaining numbers with a blue cards, with 6–9 and 11–19 revealed as shown below.

1. Ask students to take a minute to study the Number Line pocket chart quietly and show thumbs up when they have an observation they would like to share.

![Number Line Pocket Chart](image)

**SUPPORT** It may be initially disconcerting for some students to have the Number Line pocket chart start with the number 6. Explain to them that just as they can start and stop counting on any number, the Number Line pocket chart can do the same. While the goal is for students to begin a count on numbers other than 1, you may want to write 1–5 on a sentence strip or index card and post this in front of the number line. You should be able to remove this support after a couple of weeks.

2. Invite students to share their observations with a partner, and then call on three students to share their partner’s observation.

   *This encourages students to listen to each other.*

3. If not already mentioned, ask students what number is behind the first red door. How do they know? Then invite a student helper pull up the red card to reveal the number 10.

4. Ask students to whisper to a partner what number they think is behind the second red door.
   - Call on a couple of students to share their thinking with the class.
   - Invite a student helper pull up the red card to reveal the number 20.

   *You can ask students to gently slap their hands on their thighs to produce a drumroll while the helper reveals the hidden number.*

5. Explain that 20 is the first number in the twenties number family. Each of the numbers in the 20s have two digits, and the first digit is a 2.

   Compare this to the teens number family where 10 is the first number in the sequence, and the first digit is a 1.

   *As tempting as it may be to address place value at this time, students need to first become confident with recognizing and naming numbers in the teens and twenties before learning that the left-hand digit represents a number of 10s.*

6. Introduce the next five numerals, 21–25, naming each as you lift the card. Invite students to repeat the name of each number after you say it.

7. Ask students to choral count forward from 6 to 25 while you point to the numbers using the grasshopper pointer.

8. Then invite students to choral count backward from 25 to 6 while you point to the numbers using the grasshopper pointer.
Shape Pair Poster Headings page 1 of 2

square  cube

circle  sphere
Shape Pair Poster Headings  page 2 of 2

rectangle  cylinder

circle  cone
Paper Circle
**Writing Numbers 1 & 2**

Number 1 is like a stick, a straight line down that’s very quick!

Trace the numbers.

For number 2 go right around, then make a line across the ground!

Trace the numbers.
Writing Numbers 3 & 4

Go right around. What will it be?

Go around again to make a 3!

Trace the numbers.

3 3 3 3 3 3 3 3

Down and over and down some more.

That’s the way to make a 4!

Trace the numbers.

4 4 4 4 4 4 4 4
**Writing Numbers 5 & 6**

Go down and around, then you stop.

Finish the 5 with a line on top.

Trace the numbers.

```
5 5 5 5 5 5 5 5
```

Down and around in a circle you go.

That's a 6 just as you know.

Trace the numbers.

```
6 6 6 6 6 6 6 6
```