

September Days in School

Dots, Links & Numbers

Overview

The Days in School workout is intended to be a quick routine, introduced the first day of school and continued through the year. The teacher and students work together to add an adhesive dot to a paper ten-frame, a plastic link to a chain, and a numeral to a number line to keep track of the number of days they have been in school. The instructional focus this month centers on helping students develop basic counting skills.

Skills & Concepts

- Count to 20 by 1s (K.CC.1)
- Read numbers from 0–20 (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)
- Demonstrate that each successive number name refers to a quantity that is one larger than the previous number name (K.CC.4c)
- Model with mathematics (K.MP.4)
- Look for and express regularity in repeated reasoning (K.MP.8)

Materials

Activities	Day	Copies	Kit Materials	Classroom Materials
Activity 1 One Dot, One Link & One Number Each Day	1	TM T9 Ten-Frames	<ul style="list-style-type: none"> • Finger Pattern Display Cards, 1–10 • plastic links (10 in each of 2 different colors) 	<ul style="list-style-type: none"> • $\frac{3}{4}$" adhesive dots in 2 different colors • 17 or 18 sentence strips in 2 different colors (see Preparation) • sentence strip for title (optional) • erasable markers
Activity 2 Ten & Some More	11			

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

Vocabulary

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

count*
day
finger patterns
number words for 1–10
row*
set
ten-frame

Preparation

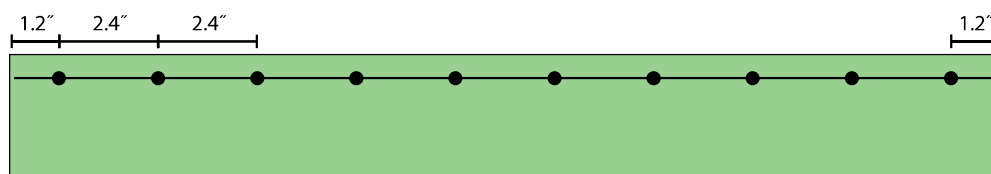
Links and Dots

On the Number Corner display, post one of the ten-frames from the Ten-Frames Teacher Master. Nearby, stick a pin into the board for hanging the first plastic link. Students will attach additional links to the first through the tenth day of school, and then you'll stick a second pin into the board several inches to the right of the first for hanging the link that starts the second chain. Keep the plastic links and adhesive dots in small containers near this display.

If you'd like to make a title for the links and dots, label a 3" × 24" sentence strip "How Many Days Have We Been in School?"

Classroom Number Line

Prepare a colored 3" × 24" sentence strip as described here, and post it on the display board. Draw a line about a half-inch from the top of the strip and make 10 dots along the line. Mark the first and tenth dots about 1.2" from the edge of the strip. Make the second dot 2.4" from the first dot, the third dot 2.4" from the second dot, and so on. (You won't be able to measure to the tenth of an inch, so these measurements are approximate.)



Before you post the first strip, use it to help prepare 16 or 17 more sentence strips, half in the same color as the first strip and half in a second color. If you draw the line on all of the strips, you can use the first strip you marked with dots as a guide for making all of the other dots without having to measure each time. You will post one of these strips after each set of 10 school days has passed, alternating colors each time to highlight the counting-by-10s pattern. (If you laminate all the strips and use an erasable pen to write the numbers, you can erase them at the end of the school year and reuse them each year. Melamine foam sponges—Mr. Clean Magic Eraser, Scotch Easy Erasing Pad, and others—are quick and effective.)

Mathematical Background

Counting the days of school is a simple way to give purpose to daily counting, talking about and learning to read numbers, and celebrating students' growth from one day, week, or month to the next.

Classroom Number Line

Teacher and students assemble this number line over time, adding one number a day to a growing set of colored sentence strips, each of which includes ten numbers (1–10, 11–20, 21–30, and so on). Because kindergartners are expected to learn to count by 10s to 100, consider highlighting the multiples of 10 (10, 20, 30, and so on) in some way. You can write them in red, embellish them with a sticker, or draw a shape around each one.



It is important to note that in contrast to the number line students will make next year in first grade, this one starts with 1 rather than 0, and each strip ends with the number that opens the door to the next decade. This is because most young students are accustomed to starting at 1 when counting, and treating each numeral rather than the interval between each pair of numerals as an object for counting. The Classroom Number Line helps students keep track of their counting as they recite the number sequence, connect the number words to the written numerals, and discover some of the many patterns and relationships in the numbers to 100 and beyond.

Update

Follow this update procedure with the class every school day. When Days in School is the featured activity, do this update as the first step in the activity.

Procedure

- The student helper points to each of the dots on the ten-frame as the class counts.
- The teacher asks students how many dots there will be after the dot for today is added.
- The student helper adds a new dot to the ten-frame and points to each dot as the class counts to confirm the new total.
- The same set of three actions is repeated with the links in the chain.
- The teacher points to each of the numerals on the Classroom Number Line as students read and count together, and then works with input from students to record the next number.
- On Day 11, the class starts a new frame of dots and a new chain of links, and adds another sentence strip to the class number line. Updates continue as described above. Students count the dots on both frames and the links on both chains, first by 1s, then by counting on from the first set of 10 (10... 11, 12, 13, and so on), and finally by 1s again to reconfirm the day's total.

Key Questions

Use the questions below to help students develop basic counting skills to 10 and begin to use groups of 5 and 10 as benchmarks.

- 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?
- What number do we need to write on our class number line today?

Activity 1

One Dot, One Link & One Number Each Day

Day 1

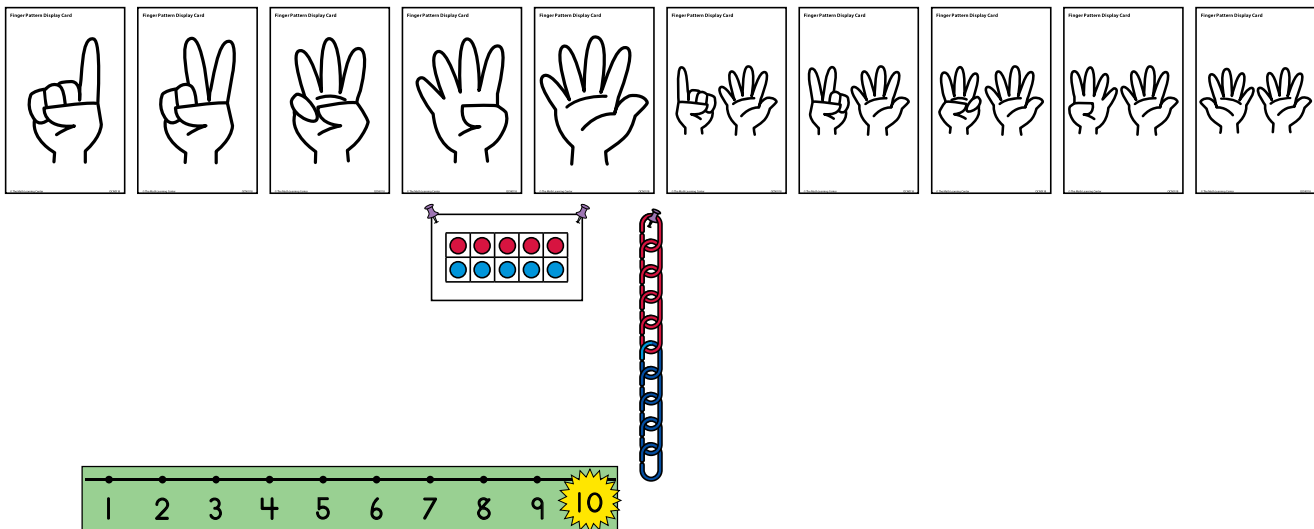
Plan to post the first Finger Pattern Display Card on the first day of class. Add the second card the next day, the third the next, and so on—so by the tenth day of school, all ten cards are on display. Post them somewhere students can see them from the Number Corner discussion area.

- 1 Let students know that one of the things they will do each day during Number Corner is show and count how many days they have been in school. Today, and for the next few days, you will take the lead, but soon plan to invite a different student to help each day.
 - Place the dot in the top-left box on the frame.
 - Then call students' attention to the Finger Pattern Display Card for 1.
 - Show them how to hold up one finger as shown on the card.
 - Have them practice holding up one finger and saying the number 1 a couple of times.
 - Then point to the dot and ask students to hold up one finger to match while they say the number 1 aloud.

- 3 Show students the container of plastic links and explain that you will hang one link on the display board to show that you and they have been in school together for one day.
 - Hang the link from the pin.
 - Then point to it and have students show how many links by using the finger formation they just learned.

- 4 Finally, draw their attention to the sentence strip you prepared. Explain that this is the start of a number line, and you will write a number each day to show how many days they have been in school.
 - Have them show how many days they have been in school using the finger formation they just learned.
 - Write a 1 below the first dot on the sentence strip, and have the students read it with you.

Repeat this sequence each day for the first ten days of school. Refer to the Key Questions list and the Update Procedure as you add a dot, a link, and a number to the display each day. Here is how the display will look by the tenth day.





Activity 2

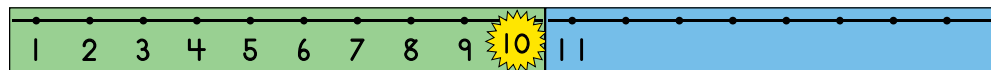
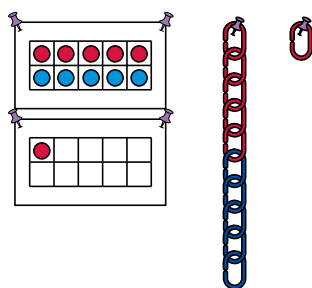
Ten & Some More

Day 11

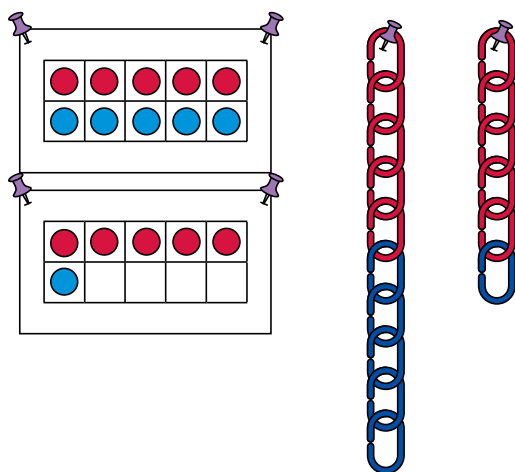
Before you meet with students for Number Corner on the 11th day of school, fasten another ten-frame below the first, stick a second pin into the board several inches to the right of the first, and post another sentence strip in a different color end-to-end with the first.

Plan to leave the Finger Pattern Display Cards on display for several months to come, but move them to a different location if they are taking up too much room on the Number Corner display.

- 1 Draw students' attention to the ten-frame that was entirely filled the previous day, and ask them to show with their fingers how many dots they see.
- 2 Show them the empty ten-frame below the first, and explain that each time one of the frames is filled, you'll add a new one to the board.
- 3 Then ask students to turn to the person sitting closest to them and tell them how many dots there will be in all when the student helper adds a new one to the empty frame for today.
Invite several students to share and explain their answers.
- 4 Invite your helper up to place a dot in the top-left box on the second ten-frame. Then have that student lead the class in counting the dots by 1s as she points to each to confirm that the total is 11.
- 5 Model for students how to count the quantity as 10 and some more.
 - Circle the first frame with your finger as you say "10." Then point to the dot on the second frame as you say "11."
 - Have students do this with you a second time, holding up all 10 fingers to represent the 10, and clapping as they say "11."
 - Then recount the dots with the students by 1s. When you finish, ask them how many dots there are in all to reinforce the fact that the last number in the counting sequence represents the total number of dots.
- 6 Draw students' attention to the chain of 10 links. Explain that just as the frame is full when there is a dot in each of the 10 boxes, the chain is finished as soon as it has 10 links.
 - Confirm that the chain has 10 links by counting them with the students.
 - Then have the helper hang a link on the second pin.
 - With the class, count the links by 1s, then as 10 and some more (10 ... 11), and then one more time by 1s.
- 7 Finally, point to each of the numbers on the Class Number Line and read them with students. Have them tell you what number to write at the beginning of the next strip, and confirm with them that they have been in school for 11 days.



Repeat this sequence each day through the 20th day of school. You might also begin to talk with students about how many dots or links it will take to complete the next set of 5 or the next set of 10. Take a little time some days to ask students to count the dots on the second frame or the links in the second chain and hold up their fingers using the appropriate finger pattern to show the number. Invite two or three volunteers to share how they counted the dots or links, and you may discover that some students are starting to use strategies that are more efficient than counting each item one at a time.



Teacher Before we start today, take a look at the dots in the second frame (points to the second frame), and hold up your fingers to show how many you see. Wow, we have some really fast counters here! Raise your hand if you'd like to share how you counted the dots in this frame.

Students I just counted 1, 2, 3, 4, 5, 6 real fast.

I know there are 5 on the top, and one more is 6.

I saw 2, and then 2, and then 2. It makes 6.

Key Questions

Add these questions starting on the 12th day of school.

- Today, we're starting with a ten-frame filled with 10 dots, and a new ten-frame that only has 1 dot so far. How many dots is that in all? How do you know?
- How many dots will we have in all after we add the dot for today? How do you know?
- Today, we're starting with a chain of 10 and a new chain that only has 1 link so far. How many links is that in all? How do you know?
- How many links will we have in all after we add the 1 for today?

