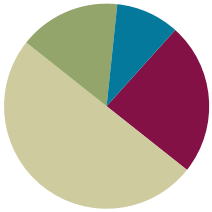
Lesson 8

Objective: Answer *how many* questions to 5 in linear configurations (5-group) with 4 in an array configuration. Compare ways to count 5 fingers.

Related Topics: More Lesson Plans for the Common Core Math

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problems	(8 minutes)
Concept Development	(25 minutes)
Student Debrief	(5 minutes)
Total Time	**(50 minutes)**



Fluency Practice (12 minutes)

- How Many Dots **K.CC.4a** (5 minutes)
- Show Me Another Way **K.CC.4a** (4 minutes)
- Finger Counting **K.CC.2** (3 minutes)

How Many Dots? (5 minutes)

Materials: (T) 5-group cards

T: We're going to practice *listen, think, raise your hand, wait.* I'm going to show you some dots. Raise your hand when you have counted the dots, then wait for the snap to say the number. Ready? (Show 1 dot card. Wait until all hands are raised, and then give the signal.)

S: 1.

T: (Show 2 dot card. Wait until all hands are raised, and then give the signal.)

S: 2.

As students begin to demonstrate mastery, deviate from a predictable pattern, and challenge them to recognize the groups of dots faster.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Use hand signals to introduce a procedure for answering choral response questions: listen (cup hand around ear), think (finger to temple), raise your hand (raise your own hand to remind them to raise theirs), and wait for the snap. Practice with general knowledge questions until students are accustomed to the procedure.

Show Me Another Way (4 minutes)

Conduct activity as outlined in Lesson 5.

Have students try all of the different combinations. You may need to indicate to them that they may use both hands to show the number. Continue the process to 5.

Finger Counting (3 Minutes)

T: Count with me. Ready? (Show pinky on the right hand.)
S: 1. (Show pinky on the left hand).
T: (Show pinky and ring fingers on the right hand.)
S: 2. (Show pinky and ring fingers on the left hand.)
T: (Show pinky on the right hand.)
S: 3. (Show pinky, ring, and middle fingers on the left hand.)
T: (Show pinky and ring fingers on the right hand.)

Remain consistent in finger counting, moving from pinky to thumb, so that students can see their hands as a number line from left to right. (The teacher begins on the right so that the students do not see the reverse.) Here is a recommended sequence: 1, 2, 1, 2, 3, 2, 3, 2, 3, 4, 3, 4, 3, 4, 5.

Notice that the teacher does not say the numbers with the students, but rather, listens intently for hesitations or errors. Return to a simpler sequence (within 3) if students begin to struggle.

Application Problem (8 minutes)

Materials: (S) Counters in a bag.

Put 4 counters in a row going across. (Students do so.) Put 4 counters in a column going up and down. (Students do so.) Draw your counters on your paper.

Note: Students are beginning to learn and have experiences that objects in different orientations does not change the total count.

Concept Development (25 minutes)

Materials: (T) 5 markers (S) Bag with 5 cotton balls

T: (On the carpet with 4 markers scattered.) How can I find out **how many** markers I have?
S: Count them.
T: Count with me.
S: 1, 2, 3, 4.

T: What is another way to organize them?
S: Move them into a line. → Line them up. → Put them in a row.
T: (After moving them.) Let's count again.
S: 1, 2, 3, 4.
T: It's the same! (Put the four markers into an array.)
T: How would I count these without putting them in a line?
S: Point to each one and count.
T: When I touch and count, I am going to go from left to right. Touch and count with me.

Give each student a bag with 5 cotton balls in it. Have them take out four, put them in a line, move them into an array, move them back to a line, counting each time. Be sure they line their array up correctly, two above two.

Have the students take out the last cotton ball.

T: We are going to make magic pets. When I call out a number, I want you to put that many cotton balls in a line to make a caterpillar.
T: 5. (Put the cotton balls into a line.)
T: Now change your magic pet into a fuzzy sleeping kitten, push the cotton balls together.
T: Put one cotton ball away. Put your cotton balls in a line to make a caterpillar.
T: Now change your magic pet into a fuzzy sleeping puppy, push the cotton balls together.
T: Now change your magic pet into two caterpillars that are exactly the same.

Materials: (S) Personal white boards

Have students take out their personal boards.

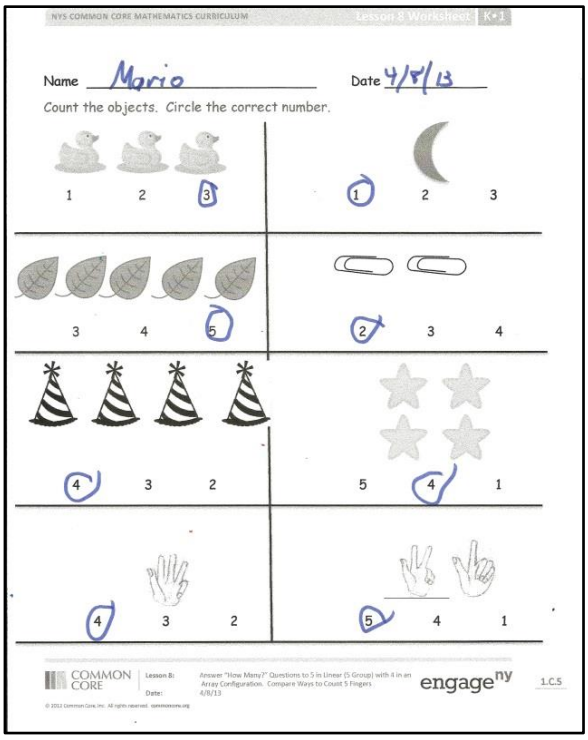
T: Draw 4 circles in a line to show your caterpillar. (Model the first few if needed.) Touch and count your circles.
S: 1, 2, 3, 4.
T: Erase. Now draw a circle in each corner. Touch and count.
S: 1, 2, 3, 4.
T: Is that the same number?

Continue this procedure with 4 and 5 in linear and array configurations. Have them touch and count as they need to each time so that they realize for themselves the conservation of the number.

Problem Set (5 minutes)

Students should do their personal best to complete the Problem Set within the allotted 5 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students solve these problems using the RDW approach used for Application Problems.

Have students count the objects and circle the correct number.



Student Debrief (5 minutes)

Lesson Objective: Answer *how many* questions to 5 in linear configurations (5-group) with 4 in an array configuration. Compare ways to count 5 fingers.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson. You may choose to use any combination of the questions below to lead the discussion.

MP.3

- How did you know **how many** ducks there were? (Have students model how they counted.)
- Ask students to turn and talk to their neighbor about how they counted the stars (array).
- Draw stars in an array on a dry erase board and have students count the stars as you model.
- Discuss the answers students put on the hand pictures. Ask if they can show other ways to make that number.
- Engage the students in a discussion about how the number stays the same even though the positioning of the objects changes.
- Do we have to touch and count to know the number is the same?
- Do we have to touch and count to count?

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.

Name _____ Date _____

Count the objects. Circle the correct number.

1 2 3

1 2 3

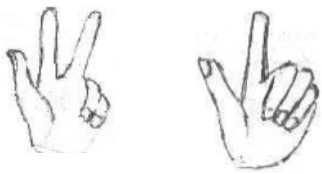
3 4 5

2 3 4

4 3 2

5 4 1

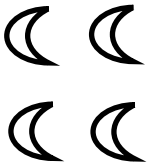
4 3 2



5 4 1

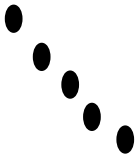
Name _____ Date _____

Count. Circle the number that tells how many.

	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5

Name _____ Date _____

Count. Circle the number that tells how many.

	4	5
	4	5
	4	5
	4	5
	4	5
	4	5
	4	5