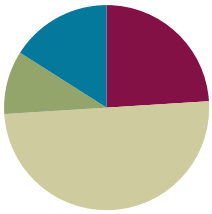
Lesson 21

Objective: Compare counts of 8 in linear and array configurations. Match with numeral 8.

Related Topics: More Lesson Plans for the Common Core Math

Suggested Lesson Structure



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

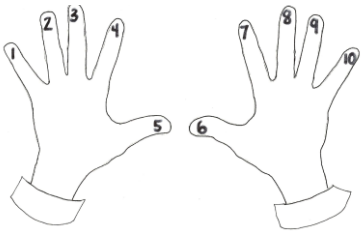
Fluency Practice (12 minutes)

- Counting with the Number Glove to 8 **K.CC.5** (4 minutes)
- Finger Flashes to 8 **K.C.C.5** (4 minutes)
- Happy Counting Within 8 **K.CC.2** (4 minutes)

Counting with the Number Glove to 8 (4 minutes)

Count up and down, as in Lesson 1, only now dramatically emphasize the transition from 5 to 6 by bringing the hand in and out of view when changing directions.

Number gloves are illustrated at right, as viewed from the students' perspective.



Finger flashes to 8 (4 minutes)

As outlined in Lesson 2. Recall that the teacher begins with the right hand, beginning with the pinky as 1, and the thumb as 5, as a continuous number line. Watch closely to see which students immediately recognize an open hand as five, and which must begin counting from one each time. If students are ready for a challenge, show them the finger combinations very briefly.

Happy Counting Within 8 (4 minutes)

As outlined in Lesson 6. It is critical that we not count along with the students or mouth the words, so that we can listen closely to the students' responses. If students hesitate or have difficulty, return to work within 5, and then gradually build up to 8. If they are ready to be challenged, quicken the pace.

Application Problem (5 minutes)

There were some children playing with marbles on the playground. Draw a circle and show 7 of their marbles in the circle. Count the marbles with your friend. Talk about what would happen if someone gave the children another marble.

Note: This reviews yesterday's lesson of counting 7 in a circular or scattered configurations. It could also begin the count of 8.

NOTES ON MULTIPLE MEANS OF ACTION AND REPRESENTATION:

Gesture to model the word *rows* by holding your arms to the side as you give the instruction "put the cubes into rows (with arms stretched out to your sides) on your work mat." Alternatively, point to a visual of a row as you give the instruction. This will clarify your intent to your special needs and your English Language learners. Do the same for *column* (arms stretched up above your head).

Concept Development (25 minutes)

Materials: (T) Linking cubes, cardboard writing frame on the whiteboard, classroom size 5-group mats to show numbers through 8 (S) Bag of 10 loose linking cubes, 5 blue and 5 red, work mat, two 5-group mats, set of digit cards 1–8

T: Count out 5 cubes of one color and 2 of another. How many are left in your bag?

S: 3.

T: Put your cubes on your 5-group mats to show that 7 is the same as 5 and 2. (Check to ensure proper placement.) Find the number card that tells how many cubes you have. Hold it up and say the number.

S: 7! (Hold up number card.)

MP.7

T: Take out one more cube of the second color and put it on your 5-group mat. How many cubes are on your top five? (5) How many on your bottom five? (3) Let's count to see how many cubes!

S: 1,2,3,4,5,6,7…8.

T: You have 8 cubes! 8 is one more than 7. We write the number 8 like this. (Demonstrate in writing frame.) Find the number card that shows 8. Hold it up and say the number.

S: (Hold up the card.) 8.

T: Put your cubes together in a tower like this. (Demonstrate so that the parts of 5 and 3 are different colors.) Can you see the 5 and the 3 hiding in our 8? (Circulate to ensure understanding.)

T: Now take your tower apart and put the cubes into rows on your work mat. Make your rows so that each one has the same number of cubes. (4 and 4.) (Guide students to use the top and bottom of their square to help them.)

T: Look at your partner's work mat. Do his cubes look the same? Let's count our cubes. Then show me the number.

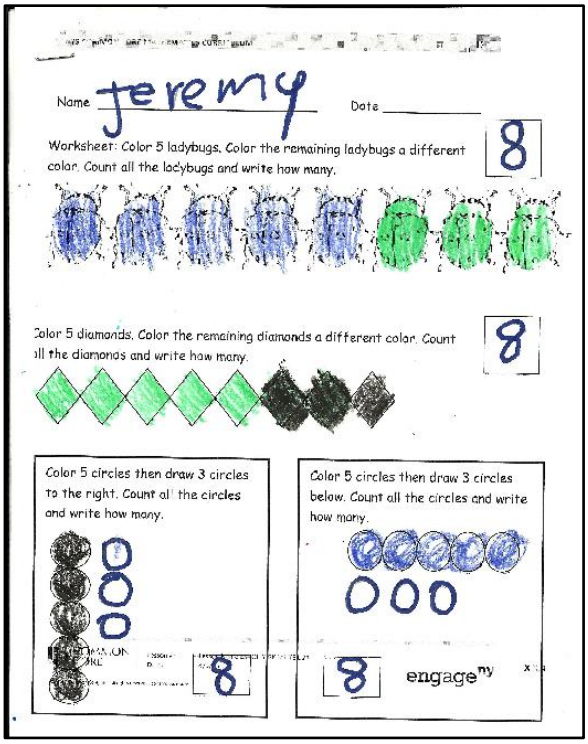
S: 1, 2, 3, 4, 5, 6, 7, 8. (Hold up digit card.)

T: I wonder what will happen if we put our cubes into columns like towers? Move your cubes so that they are on the sides of your work mat. Make sure that each side has the same number. How many are on each side? (4 and 4.) Let's count our cubes. Show me the number that tells how many you see. (1, 2, 3, 4, 5, 6, 7, 8.) (Hold up cards.)

T: Now put one cube on the top edge of your work mat, one on the left, one on the bottom, and one on the right. Do you have some cubes left? Let's see if we can do it again. (Repeat.) Do you have any more cubes left? (No.) How many cubes are on each edge? (2.) How many cubes are on your work mat? (8.)

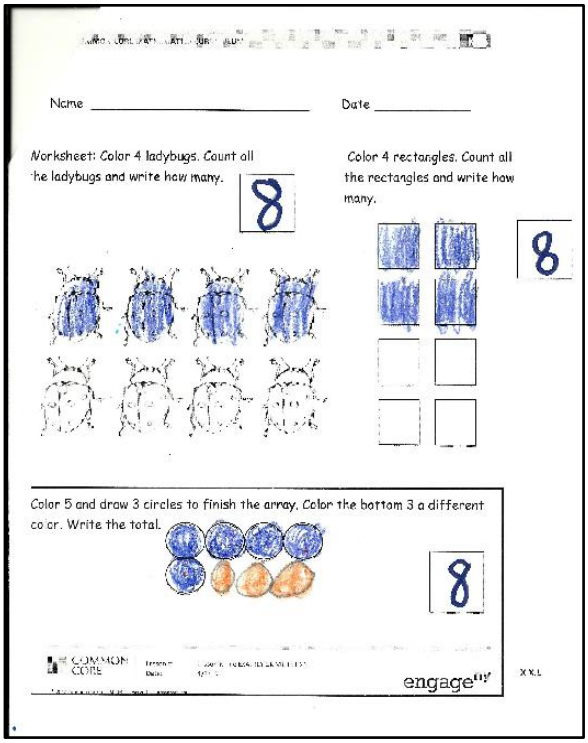
T: Look at your partner's work mat. Does it look the same as yours? (Varied responses.)

T: Put away your cubes. We are going to do some more counting in our Problem Set.



Problem Set (8 minutes)

Students should do their personal best to complete the Problem Set within the allotted 8 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.



Student Debrief (8 minutes)

Lesson Objective: Compare counts of 8 in linear and array configurations. Match with numeral 8.

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.

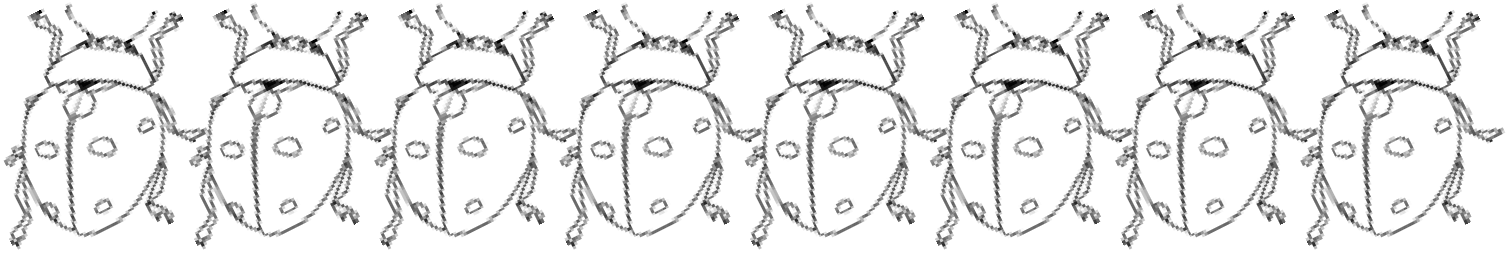
- What do you notice about the ladybugs and diamonds? How many ladybugs? How many diamonds? Does it look like the same amount?
- How were the ladybugs different on each page? The ladybugs were in a straight line and then they were pictured in rows. Did it look like there were more ladybugs in a straight line or more ladybugs in the rows?
- Look at the rows of ladybugs. What did you notice about the rows? Discuss how one group of ladybugs showed eight as 4 and 4. Are there other ways to show 8?
- What number comes before 8? What are some other things you now know about the number 8?

Exit Ticket (3 minutes)

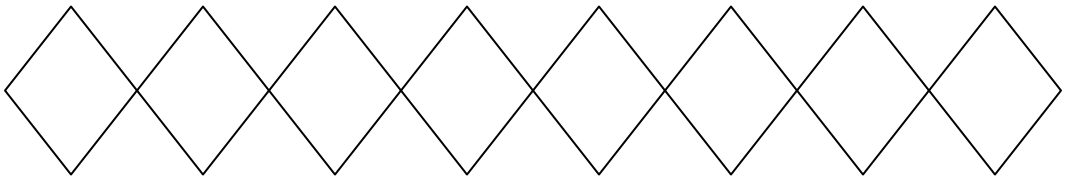
After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.

Name _____ Date _____

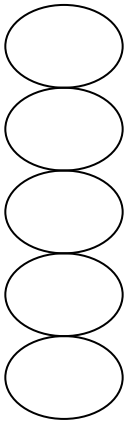
Color 5 ladybugs. Color the remaining ladybugs a different color. Count all the ladybugs and write how many.



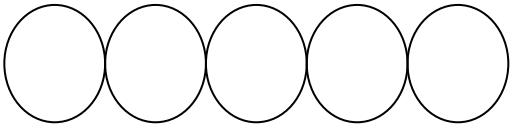
Color 5 diamonds. Color the remaining diamonds a different color. Count all the diamonds and write how many.



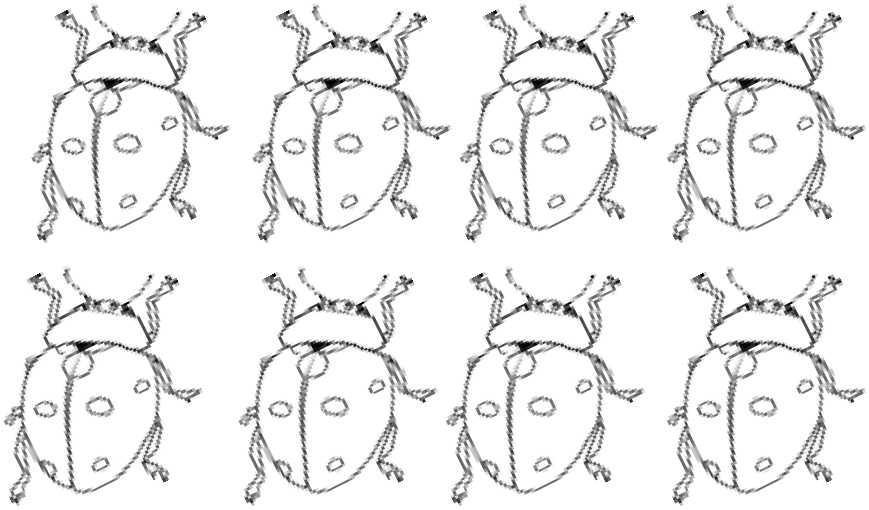
Color 5 circles then draw 3 circles to the right. Count all the circles and write how many in the box.



Color 5 circles then draw 3 circles below. Count all the circles and write how many in the box.

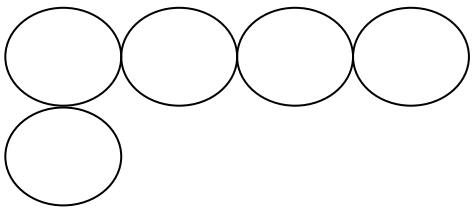


Color 4 ladybugs. Count all the ladybugs and write how many in the box.



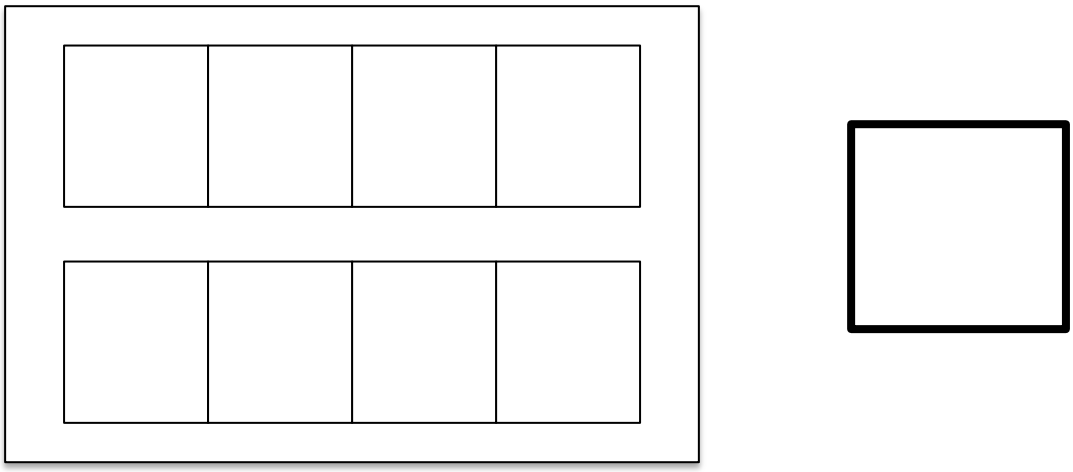
Color 4 rectangles. Count all the rectangles and write how many in the box.

Color 5 and draw 3 circles to finish the row. Color the bottom 3 circles you drew a different color. Write the total in the box.

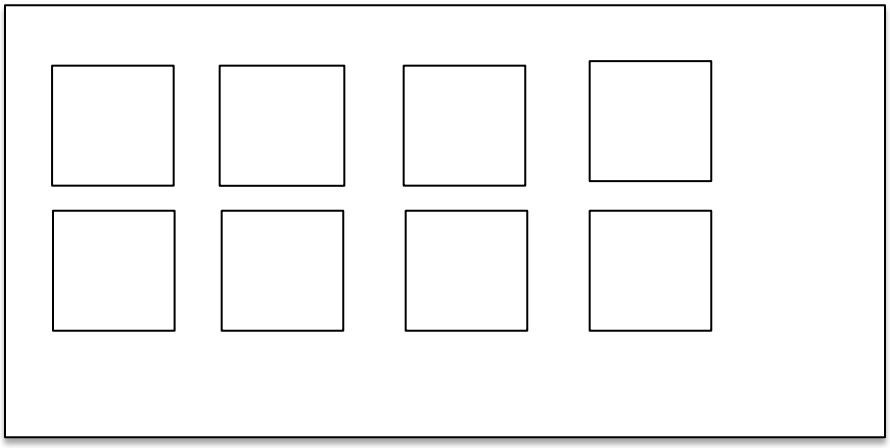


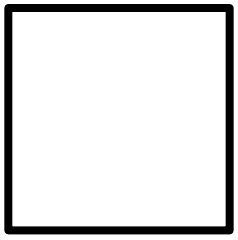
Name _____ Date _____

Color 4 squares red and 4 squares blue. Write the number of squares in the box.



Color 6 squares red and 2 squares blue. Write the number of squares in the box.

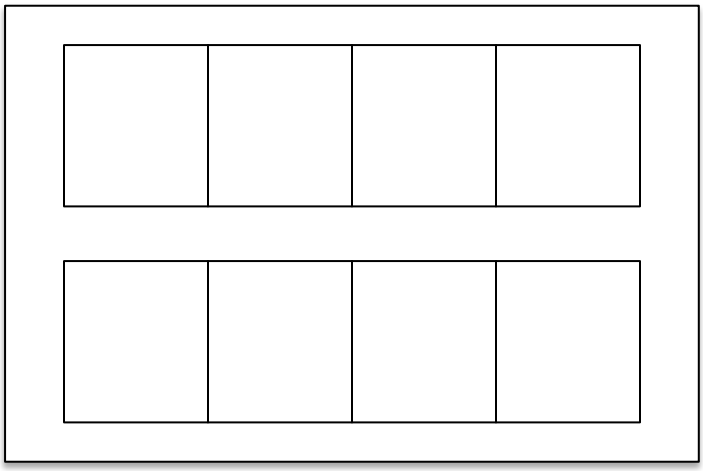


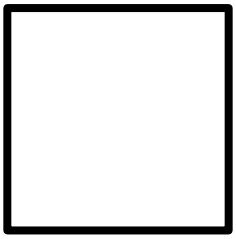


Name _____ Date _____

Color 4 squares blue. Color 4 squares yellow.

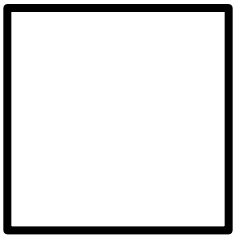
Count how many? Write the number in the box.

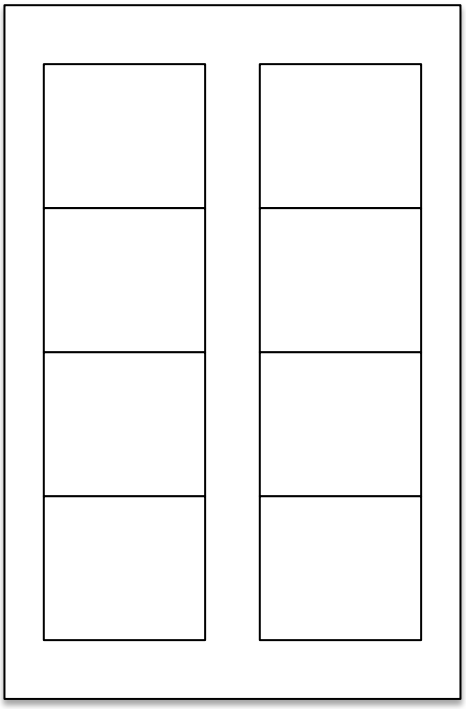




Color 4 squares green. Color 4 squares brown.

Count how many? Write the number in the box.





Count how many. Write the number in the box.