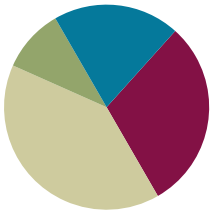
Lesson 11

Objective: Model decompositions of 3 with materials, drawings, and expressions. Represent the decomposition as 1 + 2 and 2 + 1.

Related Topics: More Lesson Plans for the Common Core Math

Suggested Lesson Structure

Fluency Practice	(15 minutes)
Concept Development	(20 minutes)
Application Problems	(5 minutes)
Student Debrief	(10 minutes)
Total Time	**(50 minutes)**



Fluency Practice (15 minutes)

- Making 3 with Triangles and Beans **K.CC.4a** (6 minutes)
- Making 3 Finger Combinations **K.CC.4a** (4 minutes)
- Hide and See (3 as the Total) **K.OA.2** (5 minutes)

Making 3 with Triangles and Beans (6 minutes)

Materials: (S) 3 beans, paper or foam triangle

T: Touch and count the corners of the triangle.
S: 1, 2, 3.
T: Touch and count your beans.
S: 1, 2, 3.
T: Our job is to make 3. Put your 2 beans on the corners of your triangle. Keep the other one in your hand. How many beans on your triangle?
S: 2.
T: How many beans in your hand?
S: 1.
T: We can tell how to make 3 like this: 2 and 1 makes 3. Echo me, please.
S: 2 and 1 makes 3.
T: Show me 1 bean on your triangle. Keep the rest in your hand. How many beans on your triangle?
S: 1.
T: How many beans in your hand?
S: 2.

T: Raise your hand when you can say the sentence, start with 1. (Wait until all hands are raised and then give the signal.)
S: 1 and 2 makes 3.

Making 3 Finger Combinations (4 minutes)

T: I'll show you some fingers. I want to make 3. Show me what it needs to make 3. (Show 2 fingers.)
S: (Show 1 finger.)
T: Raise your hand when you can say the number sentence. Start with my number.
S: 2 and 1 make 3.

Students can play with a partner, rapidly and energetically, like Rock, Paper, Scissors.

Hide and See (3 as the Total) (5 minutes)

Materials: (S) 3 linking cubes

T: Touch and count your cubes.
S: 1, 2, 3.
T: Hide 2 behind your back. How many can you see?
S: 1.
T: Put them back together. How many cubes do you have?
S: 3.
T: Hide 1 behind your back. How many can you see?
S: 2.
T: Put them back together. How many cubes do you have?
S: 3.

Variation: As students put the cubes together they can say the number sentence.

Application Problems (5 minutes)

Read the problem to the students. Have students use red and blue to draw their crayons.

Oh no! Someone threw four crayons on the floor. Draw the crayons. Compare your crayons to your friend's. How many of your crayons are the same color as your friend's?

Note: The students continue to practice counting objects in a group and seeing different hidden partners in four as they look at their crayons and their friends' crayons.

Concept Development (20 minutes)

Materials: (T/S) 5 counting bears or linking cubes for each pair of students, 1 blue paper, 1 green paper, digit cards to 5

Call students to the carpet and sit in a circle. Scatter the counting bears in the center.

T: There are 3 bears.
T: 2 bears are in the field (move 2 bears to the green paper) and 1 bear is in the water (move 1 bear to the blue paper). How many bears are there?
S: 3 bears.
T: How many bears are in the field?
S: 2 bears.
T: How many bears are in the water?
S: 1 bear.
T: Take 3 bears out of your bag and tell our **number story** to your partner. When you are finished, let your partner tell you the story of the 3 bears.

NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Young children often have dexterity issues. Sometimes the bears are hard to hold in their hands. Try using the linking cubes for children who encounter this. Match the colors of the linking cubes and the bears.

Once the students have been able to verbalize the story, let them make up other number stories with 4 or 5 bears in the field and in the water.

Give students a half piece of paper and have students get their number cards and go back to their seats.

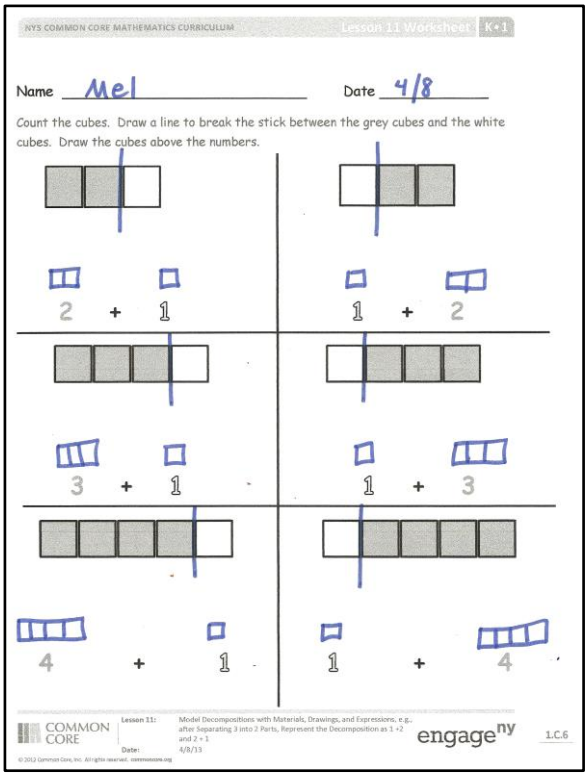
T: I'm going to tell you a number story. Draw it on your paper.
T: There are 3 flowers. 2 flowers are red and 1 flower is yellow. (Students draw.)
T: Find the number card that matches the number of red flowers. What card did you pull out?
S: 2.
T: Find the card that matches the number of yellow flowers. What number did you pull out?
S: 1.
T: Find the card that matches the number of flowers on your paper. What number did you pull out?
T: We can show the 3 flowers with our numbers like this (write 2 + 1).
T: We read it like this, 2 plus 1. Say it with me.
S: Two plus one.
T: What does the 2 tell us about in the story?
S: The red flowers.

NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Challenge your students who are performing above grade level by extending the task with questions like, "What would happen if another bear began to eat an apple, how many bears would be eating now?"

T: What does the 1 tell us about?
S: The yellow flowers.
T: What does 2 + 1 tell us about?
S: All the flowers. → The 3 flowers. → The 2 red and 1 yellow flower.

Tell another number story for the students to draw, this time with bears. For example, there were 5 bears. 4 bears were brown and 1 bear was black. Match the story with number cards and to 4 + 1 and have students explain the numbers' referents in the story.



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.

Give the directions one step at a time. First, have the students count the cubes. Then, draw a line between the white and gray cubes. Finally, draw the cubes above the numbers.

Student Debrief (10 minutes)

Lesson Objective: Model decompositions with materials, drawings, and expressions.

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

- Have the students bring their problem set to the carpet and create **number stories** using one the combinations in the Problem Set.
- Have a linking cube or counting bear model to represent various problems.
- Connect how counting by 3 the Math Way and show me another way are the same as using linking cubes or bears to show the whole and hidden partners.
- How did we show our number stories today? (With blocks, drawings, and numbers.)

Exit Ticket (3 minutes)

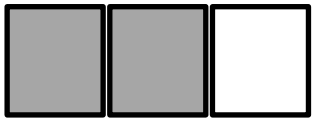
After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.

Number Cards

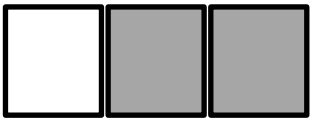
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

Name _____ Date _____

Count the cubes. Draw a line to break the stick between the grey cubes and the white cubes. Draw the cubes above the numbers.



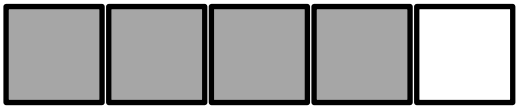
2 + 1



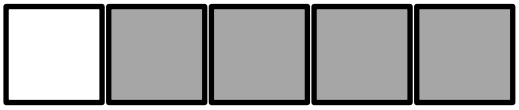
1 + 2

3 + 1

1 + 3



4 + 1



1 + 4

Name _____ Date _____

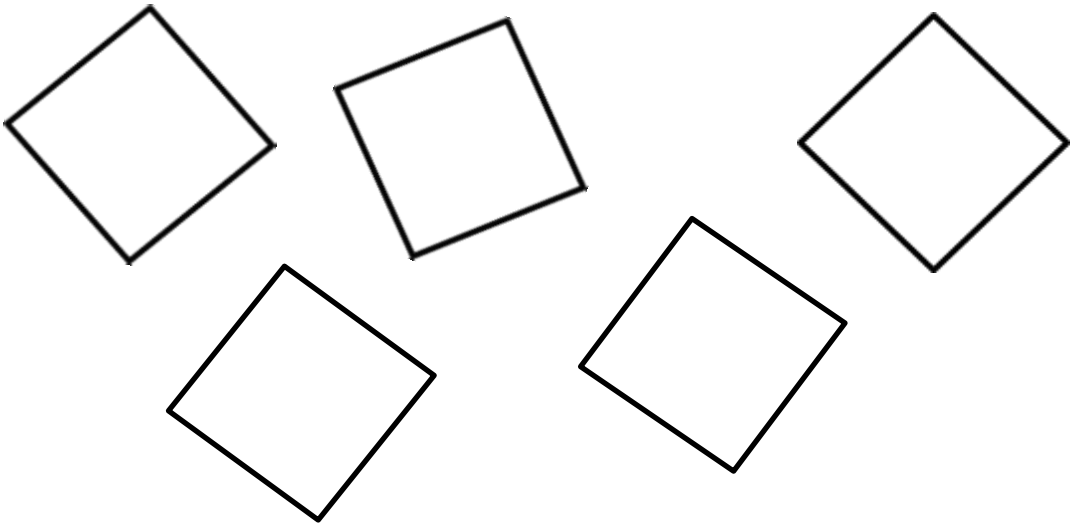
There are 2 green blocks and 1 yellow block. Draw the blocks.

There are 2 + 1 blocks. Count the blocks.

Name _____ Date _____

Feed the puppies! Here are 3 bones. Draw lines to connect each bone with a puppy so that one puppy gets 2 bones and the other gets 1 bone.

Color the shapes to show 1 + 4. Use your 2 favorite colors.



How many shapes are there? Circle the number. 1 2 3 4 5