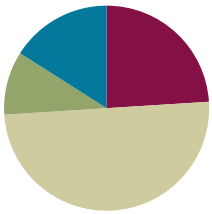
Lesson 6

Objective: Represent number bonds with composition and decomposition story situations.

Suggested Lesson Structure



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

Fluency Practice (12 minutes)

- Sprint: Make 5 **K.OA.5** (12 minutes)

Sprint: Make 5 (12 minutes)

Materials: (S) Make 5 Sprint (2 copies)

Note: This Sprint focuses on composing 5 in anticipation of the Concept Development. Students grow more comfortable with the Sprint routine while completing a task that involves relatively simple concepts. This process continues to build confidence and enthusiasm for Sprints.

T: It's time for a Sprint! (Briefly recall previous Sprint preparation activities, and distribute Sprints facedown.) Take out your pencil and one crayon, any color. For this Sprint, you are going to circle the number that will make 5. (Demonstrate the first problem as needed.)

Continue to follow the Sprint procedure as outlined in Lesson 3. Have students work on the Sprint for a second time (they soon work on two different Sprints in a single day). Continue to emphasize that the goal is simply to do better than the first time and celebrate improvement.

Application Problem (5 minutes)

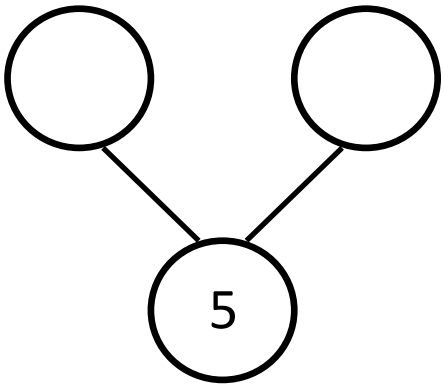
Materials: (S) 5-stick of linking cubes, pencil, paper

Play a game called Snap with your friend! Show him your 5-stick. Now, put your linking cube stick behind your back. When he says, "Snap!" quickly break your linking stick into two parts. Show him one of the parts. Can he guess the other one? If not, show him. Draw a number bond to show what you did with your cubes. Then, it is his turn! If you have time, play it with a 4-stick, a 3-stick, and a 2-stick!

Note: This game serves as a concrete review of the composition and decomposition of the numbers to 5, as well as a chance to practice creating number bonds.

Concept Development (25 minutes)

Materials: (T) White board and markers (S) 5-stick



NOTES ON MULTIPLE MEANS OF REPRESENTATION:

To help English language learners, ask them to repeat the term *number sentence*, and post it on the math word wall to be able to point to while teaching. Ask students to give an example of a number sentence, and ask them, "What do we call 2 + 3 = 5?" With practice, students feel more confident to participate in the lessons.

T: (Draw the number bond on the white board.) Oh, no! I have a number bond and no story! Who could help me? Use your 5-sticks to help me make up a story. Think about the missing numbers, and let's talk about a story to go with your picture. Does anyone have an idea?

S: There were 5 red and green balls. 2 were red. 3 were green. → There was 1 horse sleeping, and 4 horses came running up. Then, there were 5 horses. → (Various answers might move from parts to whole or whole to parts. Accept all responses. We are not encouraging a rigid interpretation of the number bond but rather want students to think flexibly. What matters is that within their stories, the sum of the parts equals the whole, though not using those terms.)

MP.1

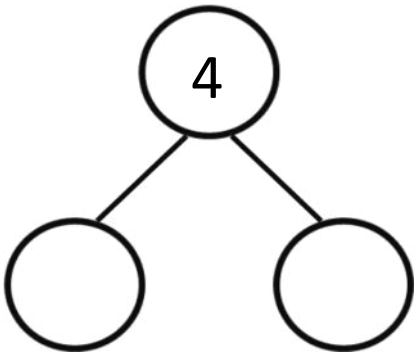
T: That's a great story! Let's fill in the number bond. (Demonstrate.) You are right. 5 is the same as 2 and 3 together! We can also write the story in a number sentence like this: 5 = 2 + 3.

T: Let's try one more. (Draw the number bond to the right on the board.)

T: Oh, no! We have another number bond with empty circles! Could you use your linking cubes to help us solve the problem? Could one of my friends help me make up a story to go with this picture?

S: There were 2 sleeping cats and 2 awake cats. How many cats were there in all? → There were 4 cats sleeping. 2 woke up, and 2 were still sleeping.

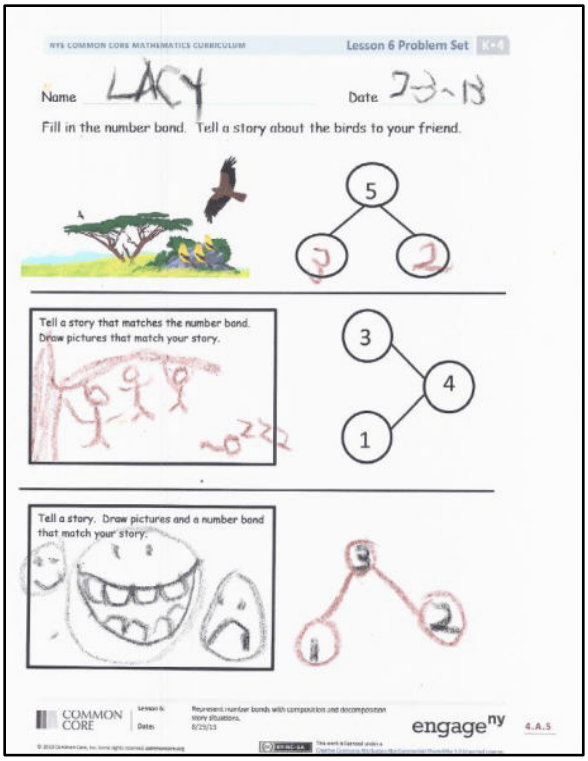
T: Yes! 2 sleeping cats and 2 awake cats make 4 cats in all. Let's fill in our number bond. (Demonstrate.) We could also write it in a number sentence like this: 2 + 2 = 4.



Repeat the exercise for several more number bonds for 5, 4, 3, and 2 before proceeding to the Problem Set. Allow students to share and discuss their stories. Model the associated number sentences in a casual manner, but do not focus on them. Students begin formal work with expressions (e.g., 3 + 4) and equations (e.g., 3 + 4 = 7) in Topic C.

Problem Set (10 minutes)

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



Student Debrief (8 minutes)

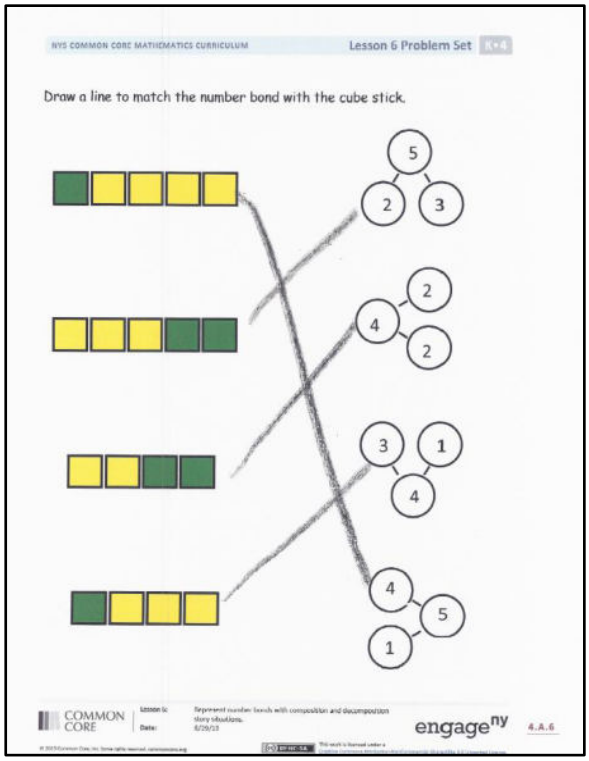
Lesson Objective: Represent number bonds with composition and decomposition story situations.

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

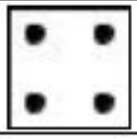
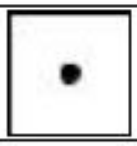
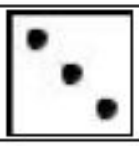
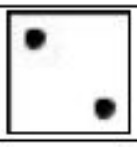
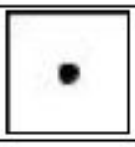
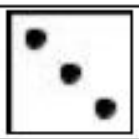
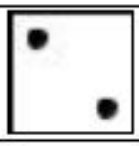
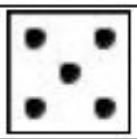
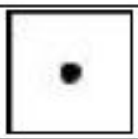
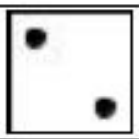
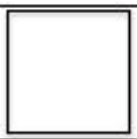
Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Student Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- How did you decide what numbers to use for your number story?
- Do your stories and the number bonds tell the same thing?
- How were your number stories different from your friends'?
- How did the Snap game connect to today's lesson?
- Look at the Problem Set with the cubes. Look at the first two sticks. How many cubes are in each stick? (5.) Look at the matching number bond. Are the numbers the same in each bond? There are 5 cubes in each stick, so why are the parts different?

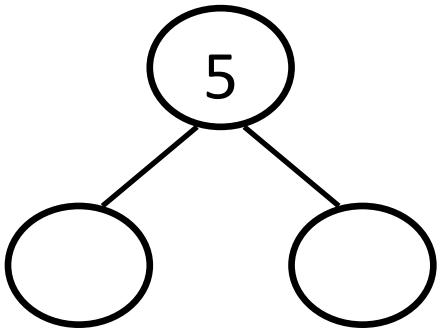


Circle the number needed to make 5.

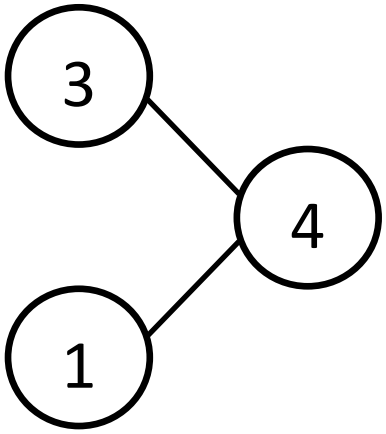
1			
2	* * * *	*	* *
3			
4		 	
5	* * *	* *	* * *	*
6		 	
7		 	
8	*	* *	* * *	* * * *
9		 	
10	1	3	4	2

Name _____ Date _____

Fill in the number bond. Tell a story about the birds to your friend.

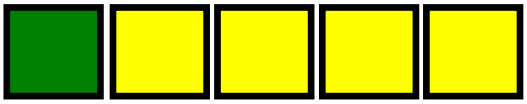


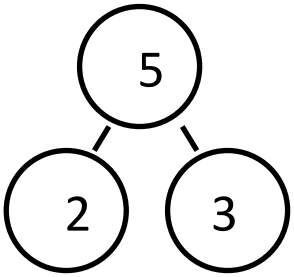
Tell a story that matches the number bond. Draw pictures that match your story.

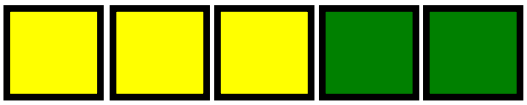


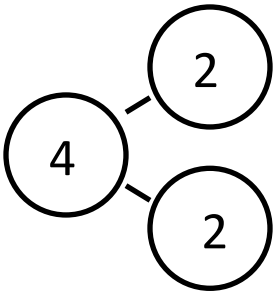
Tell a story. Draw pictures and a number bond that match your story.

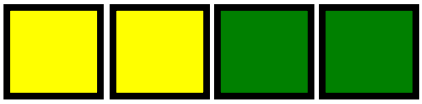
The squares below represent cube sticks. Draw a line to match the number bond to the cube stick.

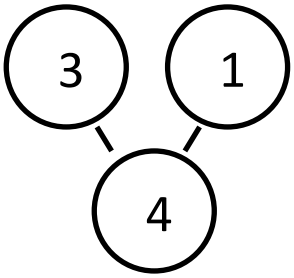


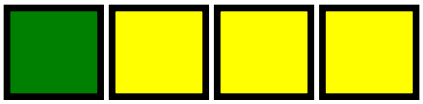


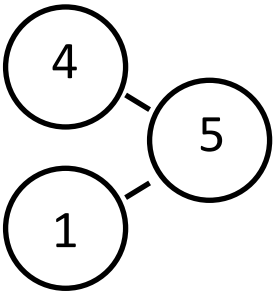








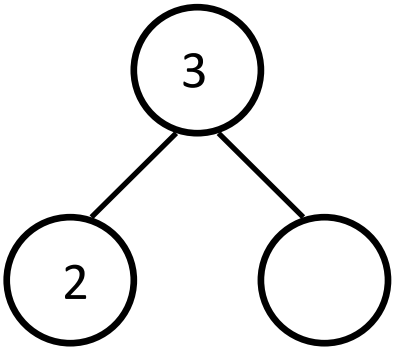




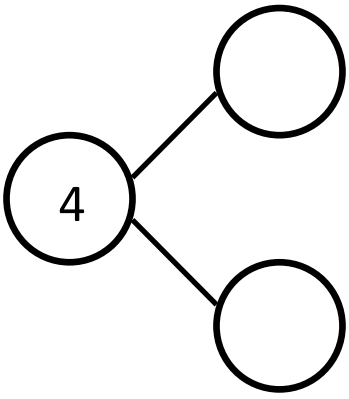
Name _____ Date _____

Tell a story. Complete the number bonds. Draw pictures that match your story and number bonds

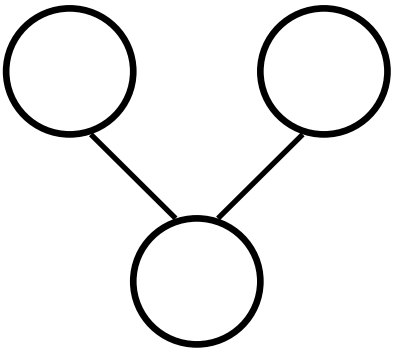
Draw some balls for your story.



Draw some crayons for your story.



Draw some shapes for your story.



On the back of your paper, draw a picture and make a number bond.