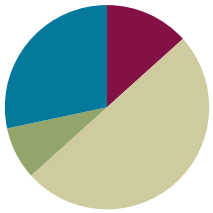
Lesson 11

Objective: Solve *add to with change unknown* math stories as a context for counting on by drawing, writing equations, and making statements of the solution.

Suggested Lesson Structure

Fluency Practice	(8 minutes)
Application Problem	(5 minutes)
Concept Development	(30 minutes)
Student Debrief	(17 minutes)
Total Time	**(60 minutes)**



Fluency Practice (8 minutes)

- Count On Cheers: 2 More **1.OA.5** (3 minutes)
- Number Bond Dash: 6 **1.OA.5** (5 minutes)

Count On Cheers: 2 More (3 minutes)

Note: This activity supports the connection of counting on by 2 and adding 2.

Teacher says the number aloud. Students repeat the number, touching their heads and counting on as they put their fists in the air, one at a time. Alternately, students can count on with boxing punches.

fiiiive six seven

Number Bond Dash: 6 (5 minutes)

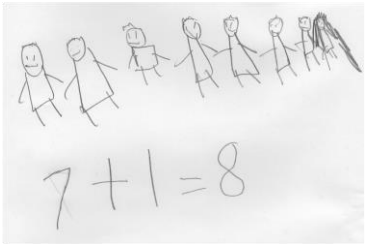
Materials: (T) Stopwatch or timer (S) Number Bond Dash: 6 (see **G1-M1-L5)**, marker to correct work

Note: By using the same system, students can focus on the mathematics alone. The activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10.

Follow the procedures for Number Bond Dash. Tell students to remember how many problems they get correct so they can try to improve their scores tomorrow.

Application Problem (5 minutes)

There are 8 children in the afterschool cooking club. How many boys and how many girls might be in the class? Draw a picture and write a number sentence to explain your thinking.



Early Finishers: How many other combinations of boys and girls could be made? Write a number bond for each combination you can think of.

Note: This problem serves as a bridge from the previous lesson's focus on solving *put together* stories. The problem serves as a context for counting on during the Debrief.

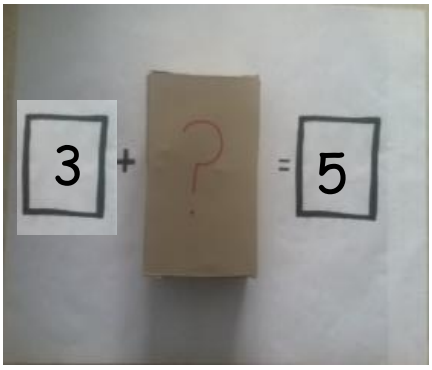
Concept Development (30 minutes)

Materials: (T) Mystery box (shoe box or other available box with a question mark on it), counting bears (or another engaging classroom material that allows you to tell stories), large blank equation template, number sentence cards and 2" x 2" sticky notes labeled with question mark (S) Personal white board with number sentence template, sets of bear counters and paper bags with question marks labeled on the front per pair, a yellow colored pencil or a crayon

Before the lesson, privately place 2 counting bears in the mystery box so that students can't see. Set the box out of sight. Have students bring their personal white boards and sit in a semi-circle. Display 3 counting bears before you.

T: Once upon a time, 3 little bears went to play tag in the forest. (Place 3 bear counters on the template on the floor.) Then, some more bears came over. (Place the box with the question mark next to the bears.) In the end, there were 5 little bears playing tag in the woods altogether.

T: How many bears do you think came to play (point to the box)? Turn and talk to a partner.



S: (As students discuss, circulate and listen.)

T: How many bears joined the group to play tag? (Have students share ideas.) What strategy did you use to decide? (Ask a few students to share varying ideas.) Let's use counting on to test our ideas.

MP.2

S/T: (Gestures over the 3.) Threeeee, (taps the box while drawing dots below the box for each count) 4, 5!

T: How many more bears came to play?

S: 2 bears!

T: Let's find out if we were right. (Opens up the box and reveals 2 bears.) You were right! There were 2 more bears that came to play tag. (Closes the box and places the 2 bears on top of the box.)

T: Write the number sentence and number bond for the story. If you need a hint, look here (point to the teacher number sentence template).

S: (Write the number sentence while the teacher circulates.)

Analyze the referents for each number ensuring that students understand what each number represents in the story. Emphasize the unknown in the number sentence and number bond as being the change.

Repeat this process with a decomposition number sentence such as 9 = 6 + ?. 9 bears were playing tag. At first, there had been 6 bears playing. How many more bears joined in?

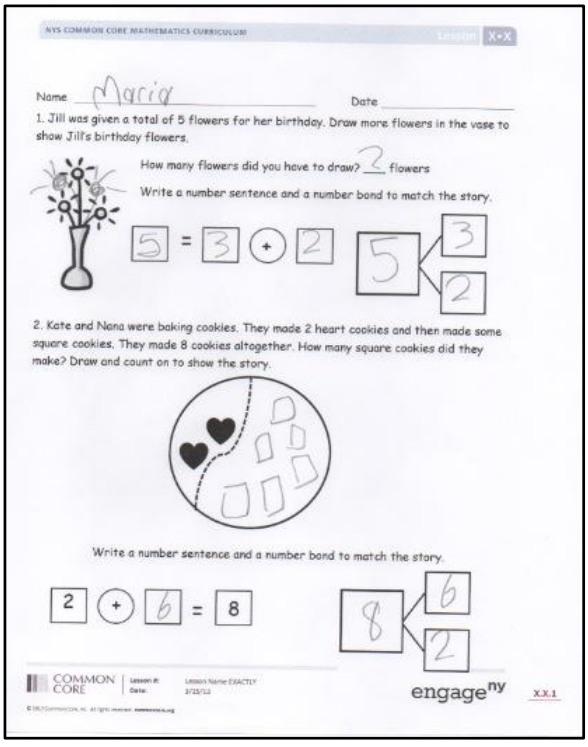
Provide sets of bears and a paper bag to each pair. Then distribute one to two number sentence cards with a question mark sticky note covering the second addend. Have students use the bears and the paper bag to tell a story that matches their number sentence card and figure out the mystery number. Circulate and listen to students sharing strategies, solutions, and writing the corresponding number sentence on their template. Encourage students to talk about what's happening in each story so that they can contextualize the numbers in the action of the story.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

The mystery number game that you play today would be a good game to send to parents to play at home. This game provides a challenging extension for students to practice counting on to find the missing addend. For those students who are able to work with larger numbers, let them count on from a two-digit number.

Problem Set (10 minutes)

Students should do their personal best to complete the problem set within the allotted 10 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.


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson X•X

Name Maria Date

1. Jill was given a total of 5 flowers for her birthday. Draw more flowers in the vase to show Jill's birthday flowers.

How many flowers did you have to draw? 2 flowers

Write a number sentence and a number bond to match the story.

5 = 3 + 2

2. Kate and Nana were baking cookies. They made 2 heart cookies and then made some square cookies. They made 8 cookies altogether. How many square cookies did they make? Draw and count on to show the story.

Write a number sentence and a number bond to match the story.

2 + 6 = 8

COMMON CORE engage^ny X.X.1

Student Debrief (17 minutes)

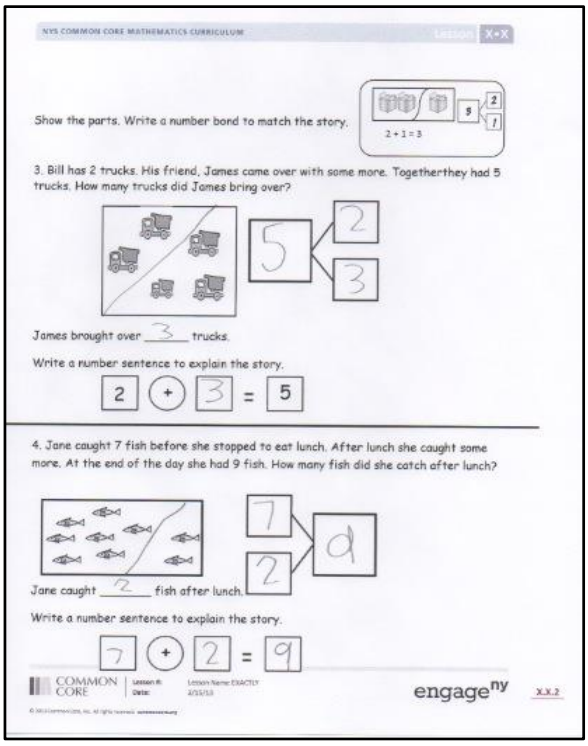
Lesson Objective: Solve *add to with change unknown* math stories as a context for counting on by drawing, writing equations, and making statements of the solution.

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.

Have students bring their Problem Sets with a yellow colored pencil or a crayon to the meeting area.

- Look at Problem 1. Where was the mystery number in your number sentence? (Have students color in the box with a yellow crayon.) Repeat the process for the rest of the Problem Set.
- What other strategy did you use to solve these problems?
- Look at Problem 3. How can you show the starting part and the mystery part in the picture?
- How are Problem 1 and Problem 3 different and similar?
- How are these number stories different from other number stories we've solved?
- Select student application problem samples that represent all decompositions of 8. There are so many different answers. Are these all correct? How can we figure out if we came up with all of the ways to make 8 boys and girls?
- There were 8 boys and girls in our application problem, 2 more boys join the cooking club. How can we count on to find out how many students are in the club now? How would you change your number sentence?
- What if there were still 8 students in the afterschool cooking club, and we knew that there were 5 boys, but we didn't know how many girls? How can you write that as a new number sentence?



Exit Ticket (3 minutes)

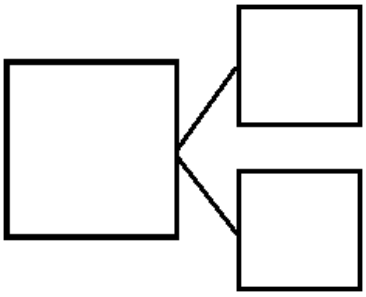
After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.

Name _____ Date _____

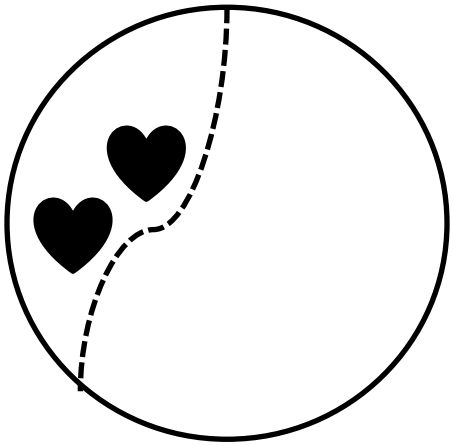
1. Jill was given a total of 5 flowers for her birthday. Draw more flowers in the vase to show Jill's birthday flowers.

How many flowers did you have to draw? ___ flowers

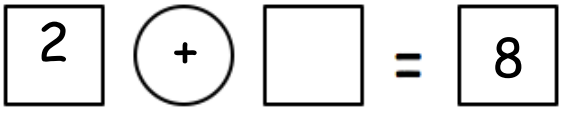
Write a number sentence and a number bond to match the story.

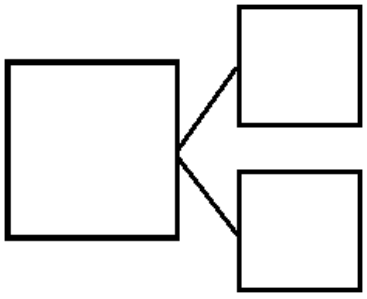


2. Kate and Nana were baking cookies. They made 2 heart cookies and then made some square cookies. They made 8 cookies altogether. How many square cookies did they make? Draw and count on to show the story.

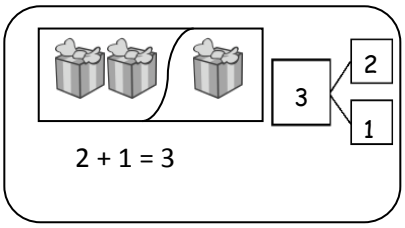


Write a number sentence and a number bond to match the story.

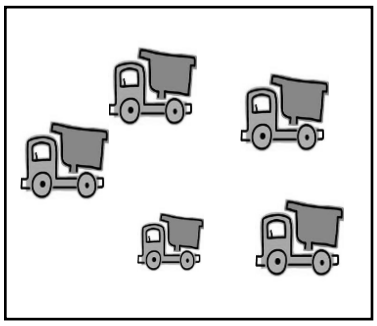


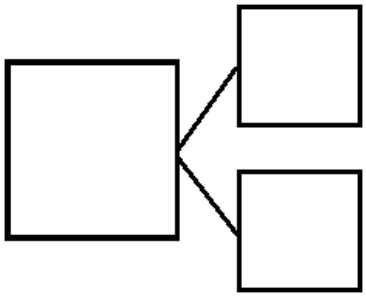


Show the parts. Write a number bond to match the story.



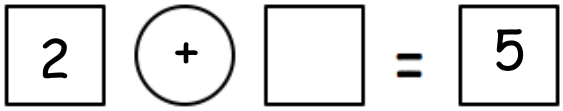
3. Bill has 2 trucks. His friend, James came over with some more. Together they had 5 trucks. How many trucks did James bring over?



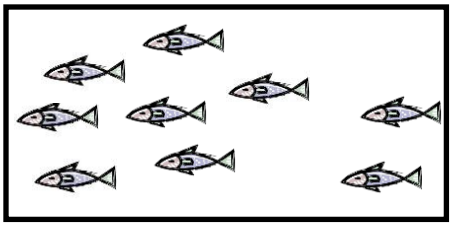


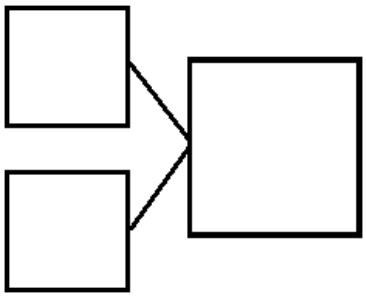
James brought over _____ trucks.

Write a number sentence to explain the story.



4. Jane caught 7 fish before she stopped to eat lunch. After lunch she caught some more. At the end of the day she had 9 fish. How many fish did she catch after lunch?



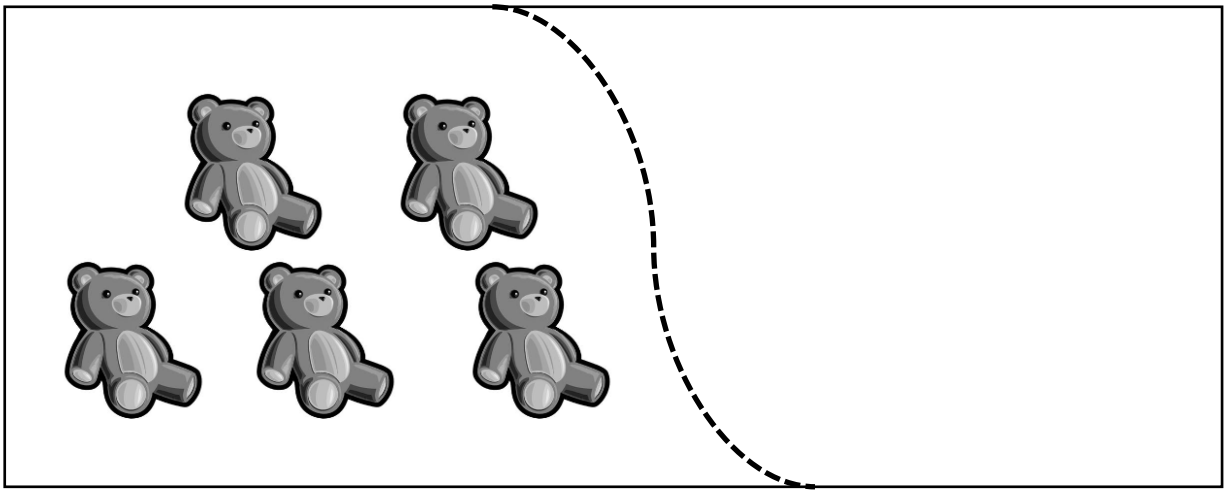


Jane caught _____ fish after lunch.

Write a number sentence to explain the story.

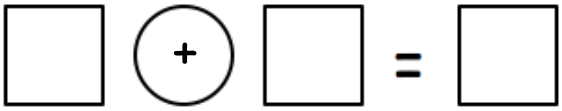
Name _____ Date _____

1. Draw more bears to show that Jen has 8 bears total.



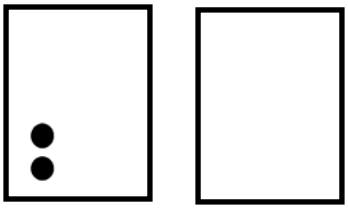
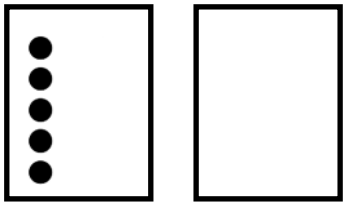
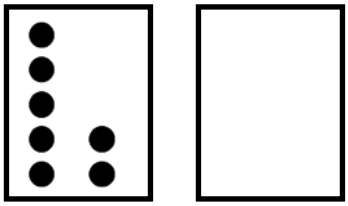
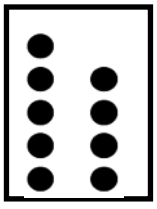
I added _____ more bears.

Write a number sentence to show how many bears you drew.



Name _____ Date _____

1. Use the 5-group cards to count on to find the missing number in the number sentences.

2	+		=	7		
8	=	5	+			
9	=	7	+			
9	=		+	9		

Match the number sentence to the math story. Draw a picture or use your 5-group cards to solve.

Scott has 3 cookies. His mom gives him some more. Now he has 8 cookies. How many cookies did his mom give him?

Now Scott has _____ cookies.

6 + ? = 9

3 + ? = 8

Kim sees 6 birds in the tree.

Some more birds fly in.

Kim sees 9 birds in the tree. How many birds fly to the tree?

_____ birds fly to the tree.

4 + ? = 8

Number Sentence Cards

3	+	2	=	5
7	+	1	=	8
6	+	1	=	7
4	+	2	=	6
6	=	5	+	1
10	=	7	+	3
8	=	6	+	2
7	=	5	+	2