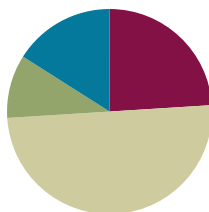


Lesson 16

Objective: Solve *add to with result unknown* word problems to 8 with equations. Box the unknown.

Suggested Lesson Structure

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



A NOTE ON CLASSROOM ORGANIZATION FOR LESSONS 16, 17, AND 18:

Because Lessons 16, 17, and 18 involve word problems that must be read aloud to the majority of kindergarten students, it is suggested that additional adult support be sought for these instructional days. Kindergarten students draw and write at very different rates. Small groups of students organized to address these differences allow for better management and greater engagement. It is very important that students begin their experience of word problems in a positive way. Support might be found in the parent community, in upper grade classes, or within the school community's personnel.

Fluency Practice (12 minutes)

- Sprint: Count Up to 8 **K.CC.2** (12 minutes)

Sprint: Make 8 (12 minutes)

Materials: (S) Make 8 Sprint (2 copies)

Note: This Sprint focuses on composing 8 using both pictures and numerals to support students' work with equations in today's lesson.

- 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 means you count up to exactly 8. (Demonstrate the first problem as needed, both by counting all and counting on.)

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) 10 linking cubes

Note: A set of 10 linking cubes for each student deliberately gives students more cubes than necessary to model the story so that they can select those needed from the larger set.

3 airplanes were flying in the air. Use your cubes to show the planes. 3 more airplanes came to join the flying fun. Show the airplanes with your cubes.

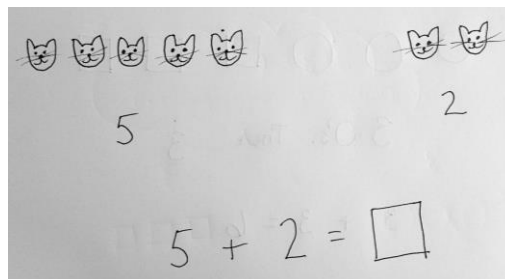
Now, with your cubes, show how many airplanes were flying in the air. Talk to your partner about what the number sentence would look like.

Note: This problem sets the stage for solving *add to with result unknown* word problems in today's lesson.

Concept Development (25 minutes)

Materials: (S) Personal white board

- T: We are going to do some imagining today. I'm going to tell you a story, but I want you to close your eyes and just think about the picture in your mind. Then, I will let you draw the picture on your personal white board. Ready?
- T: 5 kittens were playing in the yard. 2 more kittens came over to join their game. How many kittens are in the yard now? Raise your hand when you have a picture in your mind. (Wait.) Okay, you may open your eyes. Who were the characters in our story?
- S: Kittens!
- T: How many were in the yard at first?
- S: 5.
- T: How many other kittens came to play?
- S: 2 more.
- T: Good listening! Draw the kittens on your personal board. (Allow time for drawing. Depending on the abilities of students, another option would be to have students act out the situation with linking cubes rather than drawing the animals.)
- T: Hold up your board so I can see your cute kittens. I'll put mine on the board, too. (Demonstrate.) Now, write a number to show the kittens that were there at first. How many?
- S: 5.



NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Help students, especially English language learners, to have meaningful conversations with each other by teaching them to ask questions, such as "Do you agree?" and "Why did you do that?" Teaching students to ask meaningful questions of each other extends their sharing and holds them accountable for sharing their thinking.



NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Support students working below grade level by chunking the tasks for them a step at a time: "Draw the 5 kittens, and show me. Now, draw the 2 kittens that came after. Write the number of kittens," etc. Continue to practice a step at a time until students feel confident and can continue on their own.

MP.1

T: Write a number to show the kittens that came later to play. How many?

S: 2.

T: Great job! We have $5 + 2$ kittens. We don't know how many there are yet, though. Let me finish my number sentence with a mystery box, and when we find the answer, we can write it in the box. Write the number sentence on your board like mine. (Demonstrate.) How can we find out how many kittens there are in the yard?

S: We can count them all! → We could use our fingers. → I started at 5 and counted 2 more.

T: Talk with your partner about how you can find the number that belongs in the box. (Allow time for sharing and discussion.) Who would like to share his answer?

S: 7.

T: What if 3 kittens had come to play instead of 2? Could you change your picture and make a new number sentence?

Continue with additional *imagining* situations to 8, encouraging students to listen with their eyes closed and then draw the pictures. They should then write the equations and box the unknowns on their personal white boards. Encourage Level 1 and 2 problem-solving strategies, as in the Sprint, but do not require students to use Level 2 strategies.

Problem Set (10 minutes)

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

Please see the note at the beginning of this lesson. The adults should read each problem aloud to their groups and watch to ensure understanding during the completion of the exercise.

Student Debrief (8 minutes)

Lesson Objective: Solve *add to with result unknown* word problems to 8 with equations. Box the unknown.

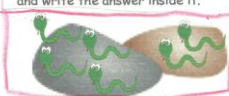
The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

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.

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 16 Problem Set K•4


Name Olivia Date _____

There are 4 snakes sitting on the rocks. 2 more snakes slither over. How many snakes are on the rocks now? Put a box around all the snakes, trace the mystery box, and write the answer inside it.




$$4 + 2 = \boxed{6}$$

There are 5 turtles swimming. Draw 2 more turtles that came to swim. How many turtles are swimming now? Draw a box around all the turtles, draw a mystery box, and write the answer.



$$5 + 2 = \boxed{7}$$

Today is your birthday! You have 7 presents. A friend brings another present. Draw the present. How many presents are there now? Draw a mystery box and write the answer inside it.



$$7 + 1 = \boxed{8}$$

COMMON CORE Lesson 16: Solve add to with result unknown word problems to 8 with equations. Box the unknown. 8/21/14 engage^{ny} 4.C.3.2

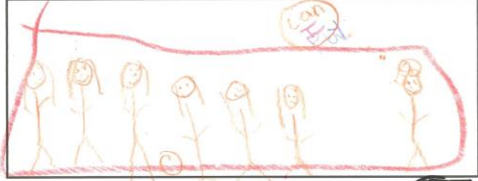
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Any combination of the questions below may be used to lead the discussion.

- Look at the snakes in the Problem Set. What is the same about the snakes and the number you wrote in the mystery box? How about the turtles and the presents?
- In the Problem Set, how many friends were playing soccer? What did you do to find out how many there were?
- How did you decide what number should go in the mystery box? Did your friend do the same thing?
- How did your drawings help you with your work?

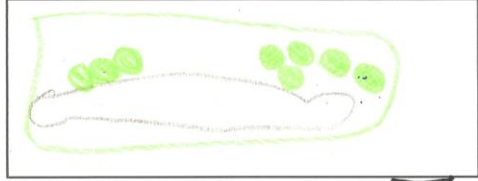
NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 16 Problem Set K•4

Listen and draw. There were 6 girls playing soccer. A boy came to play. How many children were playing soccer then? Draw a box around all the children.



$$6 + 1 = 7$$

Listen and draw. There were 3 frogs on a log. 5 more frogs hopped onto the log. How many frogs were on the log then? Draw a box around the frogs and box the answer.
































$$3 + 5 = 8$$

COMMON CORE Lesson 16: Solve *add to with result unknown* word problems to 8 with equations. Box the unknown. Date: 6/23/14 **engage^{ny}** 4.C.3.3

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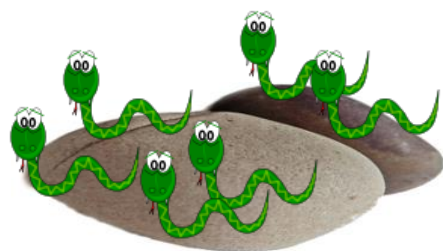
Circle the number to make 8.

1		 		
2				
3		 		
4	* * * * *	* *		* * *
5				
6		  		
7	* * * *	* * *	* * * *	* *
8				
9		  		
10	* *	* * * * * * * * * *		
11	2	6	4	3
12		  		
13	1	7	6	5

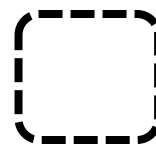
Name _____

Date _____

There are 4 snakes sitting on the rocks. 2 more snakes slither over. How many snakes are on the rocks now? Put a box around all the snakes, trace the mystery box, and write the answer inside it.



$$4 + 2 =$$



There are 5 turtles swimming. Draw 2 more turtles that come to swim. How many turtles are swimming now? Draw a box around all the turtles, draw a mystery box, and write the answer.



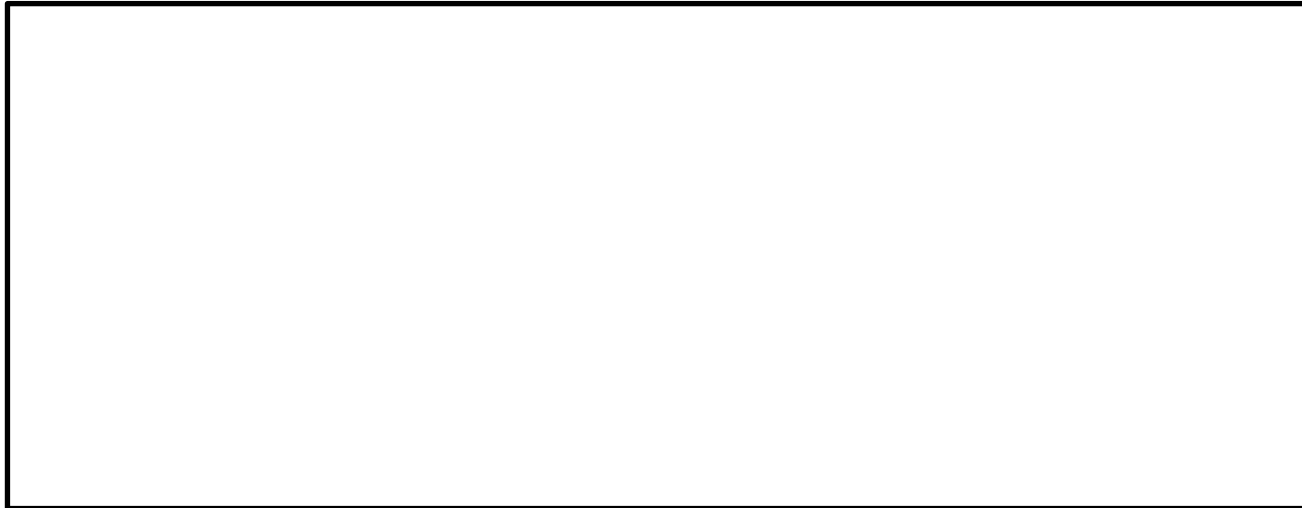
$$5 + 2 =$$

Today is your birthday! You have 7 presents. A friend brings another present. Draw the present. How many presents are there now? Draw a mystery box, and write the answer inside it.



$$7 + 1 =$$

Listen and draw. There were 6 girls playing soccer. A boy came to play. How many children were playing soccer then? Draw a box around all the children.

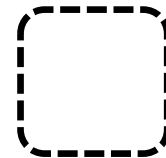


6

+

1

=



Listen and draw. There were 3 frogs on a log. 5 more frogs hopped onto the log. How many frogs were on the log then? Draw a box around the frogs, and box the answer.



3

+

5

=

Name _____

Date _____



There are 3 penguins on the ice.
4 more penguins are coming.
How many penguins are there?

$$3 + 4 = \boxed{}$$



There is 1 mama bear. 5 baby
bears are following her. How many
bears are there? Draw a box for
the answer.

$$1 + 5 = \boxed{}$$

Draw 7 balls in the ball box. Draw a girl putting 1 more ball in the ball
box. Circle all the balls, and draw a box for the answer. Write your
answer.



$$7 + 1 = \boxed{}$$