

## **Week 2 Lesson 3: Solve *add to with result unknown* word problems to 8 with equations. Box the unknown.**

Standard(s) Covered:

K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.

K.OA.A.2 Add and subtract within 10 to solve contextual problems using objects or drawings to represent the problem.

K.OA.A.3 Decompose numbers less than or equal to 10 into addend pairs in more than one way (e.g.,  $5 = 2 + 3$  and  $5 = 4 + 1$ ) by using objects or drawings. Record each decomposition using a drawing or writing an equation.

### **Lesson Structure**

Activity 1 Morning Foundational Math Talks	30 minutes
Video Play Time	24 minutes
Activity 1 Application Problem	5 minutes
Activity 2 Concept Development	25 minutes
Student Debrief	10 minutes
Exit Ticket	3 minutes
Additional Practice	10 minutes

### **Activity #1 Morning Foundational Math Talks**

We will continue developing a routine for you to begin each math lesson with. The Foundational Math Talks will focus on the following Kindergarten standards from the Counting and Cardinality and Operations and Algebraic Thinking Domains.

**K.CC.A.1** Count to 100 by ones, fives, and tens. Count backward from 10.

**K.CC.A.2** Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

**K.CC.A.3** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20.

**K.OA.A.4** Find the number that makes 10, when added to any given number, from 1 to 9 using objects or drawings. Record the answer using a drawing or writing an equation.

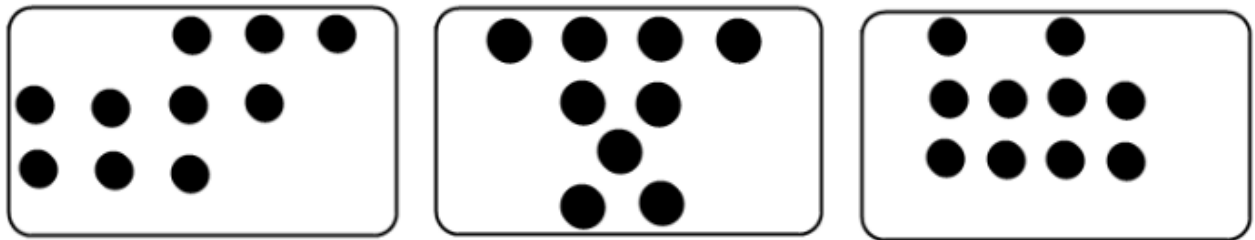
We will begin with the number game! This is great for listening and counting in various ways. Everyone stands up around a meeting rug, or in a circle. Today, we will count to 50. We start counting and each person counts on as we go around the circle. If you say the designated number of the day (50), then you sit down. The counting starts all over again with the students that are still standing, and is continued until 1 person is left standing. Be sure that you are involved in playing the game too!

Another game that we can play during our morning activity is "I Have Who Has" The teacher passes out cards in random order with a number written on it. The first student says "I have \_\_\_\_\_ who has \_\_\_\_\_(the number

that comes after their number),” The student that has that card goes next and the game continues until each student and teacher has read his/her card. Today, you will need cards numbered 1-20 or at least one card for each player.

After playing the “I Have Who Has” game, students should then form a human number line by ordering themselves with their cards from 1-20. Once they are done, practice counting again and have each student take one step forward as you say the number they are holding.

The next activity for Morning Math Talks is using number dots. Students need to see each of the dot patterns below, one at a time. Then the teacher calls on different students to explain how many dots they saw, and how they saw them. The teacher can use a white board, or a piece of paper that has dots pre-drawn on it. This is also a time where teachers can model equations as students explain their thinking.



The final activity for Morning Foundational Math Talks is a great transitional game once you are ready for students to their desk for the next activity. Teachers can use a large foam die, number cards, ten frame cards, etc. to show one addend and have each student tell you the number needed to make a sum of 10. This is a great transitional game once you are ready for students to go to their desk for the next activity.

**Lesson Video** <https://www.youtube.com/watch?v=ABM271-lrLs>

### Activity #1 Application Problem

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.

#### Teacher Notes:

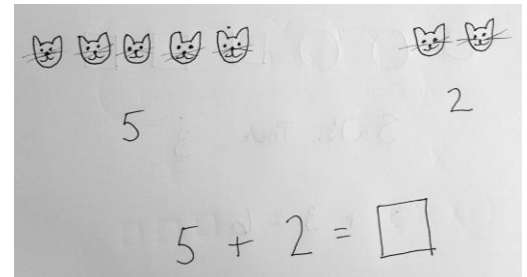
- This problem sets the stage for solving *add to with result unknown* word problems in today’s lesson.

- 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.

## Activity #2 Concept Development

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.
- 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.

### Teacher Notes:

- 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.
- Help English language learners understand the directions by gesturing with arms extended fully to the sides while instructing them to place their linking cubes in a row. Or, point to a visual of row while giving directions. Alternatively, ask students to show you a row with their arms to be sure that the instructions are clear.

### **Problem Set (10 minutes)**

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

#### Teacher Notes:

- As students are working, circulate to provide support. Ask questions like those used during the Activity. The purpose of this time is to support students as they shift to working problems independently.
- The adults should read each problem aloud to their groups and watch to ensure understanding during the completion of the exercise.

**Problem Set**

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.



$$4 + 2 = \square$$

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.



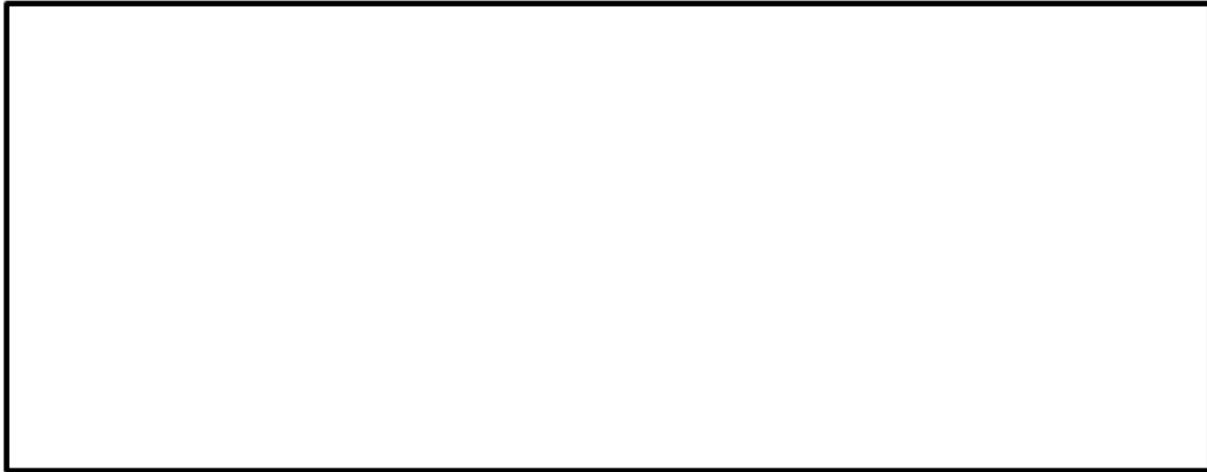
$$5 + 2 =$$

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.



$$6 + 1 = \square$$

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.



$$3 + 5 =$$

## Student Debrief

**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.

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?


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.



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


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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.



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



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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.



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


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.



$$6 + 1 = \boxed{7}$$


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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.



$$3 + 5 = \boxed{8}$$

**Exit Ticket**


After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help with assessing students' understanding of the concepts that were presented in today's lesson and planning more effectively for future lesson. The questions may be read aloud to the students.

**Exit Ticket**

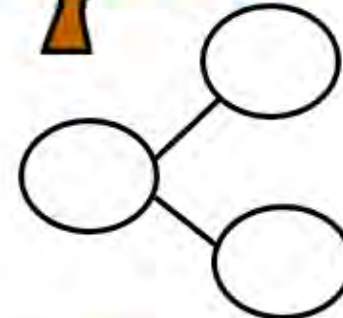
Name \_\_\_\_\_ Date \_\_\_\_\_




There are 8 trees. 5 are palm trees, and 3 are apple trees. Fill in the number sentences and the number bond.



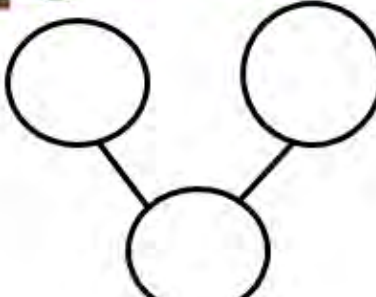
$\square = \square + \square$   
 $\square + \square = \square$




There are 8 trees. 4 are oak trees, and 4 are spruce trees. Fill in the number sentences and the number bond.



$\square = \square + \square$   
 $\square + \square = \square$





**Additional Practice**

Name \_\_\_\_\_ Date \_\_\_\_\_



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

$$3 + 4 = \boxed{\phantom{00}}$$



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

$$1 + 5 = \phantom{\boxed{\phantom{00}}}$$

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.



$$7 + 1 = \phantom{\boxed{\phantom{00}}}$$