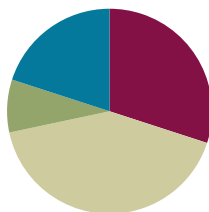


Lesson 6

Objective: Represent put together situations with number bonds. Count on from one embedded number or part to totals of 8 and 9, and generate all expressions for each total.

Suggested Lesson Structure

■ Fluency Practice	(18 minutes)
■ Application Problem	(5 minutes)
■ Concept Development	(25 minutes)
■ Student Debrief	(12 minutes)
Total Time	(60 minutes)



Fluency Practice (18 minutes)

- Red Light/Green Light: Counting by Ones **1.NBT.1** (5 minutes)
- Target Practice: 6 and 7 **1.OA.6** (8 minutes)
- Number Bond Dash: 7 **1.OA.6** (5 minutes)

Red Light/Green Light: Counting by Ones (5 minutes)

Note: By providing students with ongoing practice with counting throughout the year, they build and maintain their counting skills. This counting work is also foundational for later Grade 1 work with adding and subtracting within 100.

Say a number between 1 and 100. When you say “green light,” students begin running in place and counting aloud together, beginning with the number you said. When you say “red light,” they stop counting and freeze. Any students who are still moving or counting after you say “red light” sit down until the next game. Continue playing with a new starting number every time you say “green light.” Play until only a few students are standing, or when you see fit. Then, instruct the whole class to stand and start the game again.

A suggested sequence of start numbers would be 15, 28, 35, 48, 55, 68....



NOTES ON MULTIPLE MEANS OF REPRESENTATION:

For those students who are still developing basic counting skills, until this skill becomes automatic, provide a visual tool such as the hundreds chart in a place where they can easily see it during the game.

Target Practice: 6 and 7 (8 minutes)

Materials: (S) 7 counters and a die per partner

Note: This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10.

Break students into partners. Give each set of partners 6 counters. Instruct them to take turns as the Roller and the Target Finder. The Roller rolls the dice. The Target Finder determines the partner to 6. Students may use counters as needed. First, play with 6 as the target number, and then distribute another counter to each set of partners and practice making finding to 7.

Number Bond Dash: 7 (5 minutes)

Materials: (T) Stopwatch or timer (S) Number bond dash 7 (Fluency Template), marker to correct work

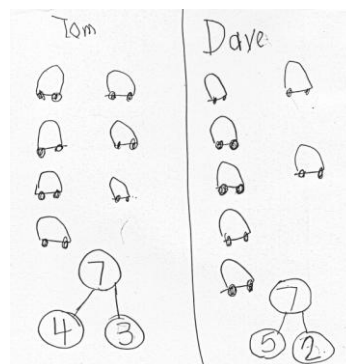
Note: By using the same system repeatedly, students can focus on the mathematics alone. This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10.

Follow procedure for Number Bond Dash (Lesson 5).

Application Problem (5 minutes)

Tom has 4 red cars and 3 green cars. Dave has 5 red cars and 2 green cars. Dave thinks he has more cars than Tom has. Is Dave right? Draw a picture to show how you know. Write a number bond to show each of the boys' sets of cars.

Note: This problem is designed as a bridge from the previous lesson's focus on decompositions of 7, and provides a lead-up to today's Concept Development as students prove that 8 can be decomposed in many ways.



Concept Development (25 minutes)


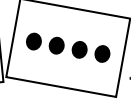
Materials: (T) 8 animals picture card (Template 1), ways to make 8 (Template 3) (S) 5-group cards 0–8 (Lesson 5 Template 1), 8 animals picture card (Template 1), blank number sentence and number bond (Template 2), personal white board, ways to make 8 (Template 3)

Insert blank number sentence and number bond template (Template 2) into personal white boards prior to the lesson. Assign students partners (A and B), and have them sit on the carpet with their 5-group cards.



NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Remember to highlight critical vocabulary for students who may need another representation to make the connection. Displaying pictures of the animals talked about in the lesson will help these students. Or, have students share what these animals are called in their native language to make it more personally meaningful.

- T: (Project 8 animals picture card.) Look at the picture. Talk with your partner about the different parts you see. (Circulate as the students discuss.)
- S: (Discuss as the teacher circulates.)
- T: What two different animals do you see?
- S: Frogs and ducks!
- T: Partner A, show how many frogs there are with your 5-group cards, using the number side.
- S: (Show the numeral 4.)
- T: Partner B, show how many ducks there are with your 5-group cards, using the dot side.
- S: (Show 4 dots.)
- T: Yesterday, what strategy did we use to find how many students were in the classroom?
- S: We counted on.
- T: Let's count on to see how many animals there are altogether, starting with...
- S: 4!
- T/S: Foouuur, 5, 6, 7, 8. (Count, while pointing to  .)
- T: Work with your partner to write a number sentence that matches our frogs and ducks on your personal white board.
- S: (Write $4 + 4 = 8$ or $8 = 4 + 4$.)
- T: How else are these animals different from one another?



NOTES ON MULTIPLE MEANS FOR ENGAGEMENT:

Adjust lesson structure to suit specific learning needs, remembering that some students will need to keep counting all (by flipping the cards to expose all of the dots) before they are secure enough in their skills to count on.

Repeat this process as student record the decompositions of 8, using their 5-group cards to count on from one part (the numeral) to find the total, and recording the decomposition in an equation on their personal white boards.

- T: Now, we're going to play a game called **Ways to Make 8!** The goal is to find all of the different ways to make 8 with your partner and record it on your recording sheet.
1. Put your 5-group cards together in the center. Partner A's cards should all show the dot side. Partner B's cards should all show the number side.
 2. Partner A picks a number card and a dot card that she thinks make 8. Both partners check together by counting on from the number card.
 3. Partner A writes the number bond and expressions on her sheet, and Partner B checks it, saying, "That's correct!" or "Try again, friend."
 4. Then, you take turns until each of you has all of the different ways to make 8!

(Discuss ways to work with $4 + 4$, as this combination requires duplicates. Ask students how they might solve this dilemma!)

As students work, circulate, and encourage active counting on. As students finish, have them save their recording sheet to add to their portfolio of number bonds for reference.

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.

Student Debrief (12 minutes)

Lesson Objective: Represent *put together* situations with number bonds. Count on from one embedded number or part to totals of 8 and 9, and generate all expressions for each total.

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

Ask students to come to the meeting area.

- T: We're going to write all of the number bonds of 8 in an order based on the numbers. Talk with your partner about how we can do this.
- S: (Responses may vary. Circulate, and listen to discussion.)
- T: I heard someone say to start with $8 + 0$. How will that be the same as our other number posters? (Refer to the posters of 6 and 7.)
- S: We started with the biggest part.
- T: Let's write all of the number bonds of 8, starting with 8 and 0. (Record all of the number bonds of 8 on a chart, with the first part decreasing by 1 each time, and call on students to help you write the expressions.)

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.

- (Show a blank Problem Set, or re-draw the pictures from the Problem Set on the board.) Look at the

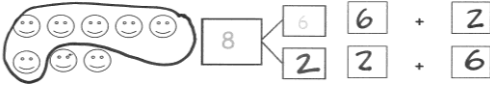
NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 6 Problem Set 1•1

Name Maria Date _____


Circle the part. Count on to show 8 with the picture and number bond. Write the expressions.

Circle 7 


1. Circle 6. How many more does 6 need to make 8?



2. Circle 5. How many more does 5 need to make 8?








3. Circle 4. How many more does 4 need to make 8?




COMMON CORE Lesson 6: Represent *put together* situations with number bonds. Count on from one embedded number or part to totals of 8 and 9, and generate all addition expressions for each total. engage^{ny} 1.B.37

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 6 Problem Set 1•1


4. These number bonds are in an order starting with the biggest part first. Write to show which number bonds are missing.

a.  b.  c.  d.  e. 

5. Use the expression to write a number bond and draw a picture that makes 8.

$3 + 5$ 

6. Use the expression to write a number bond and draw a picture that makes 8.

$8 + 0$ 

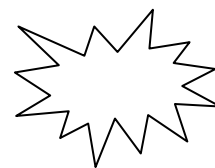
COMMON CORE Lesson 6: Represent *put together* situations with number bonds. Count on from one embedded number or part to totals of 8 and 9, and generate all addition expressions for each total. engage^{ny} 1.B.38

smiley faces in Problem 1. What other parts can you see hiding in 8? (Repeat with Problems 2 and 3.)

- Look at our poster for all of the different ways to make 8. What patterns do you see?
- Think about our game, Ways to Make 8. Why did we only use our cards 0 through 8 today?
- Talk with your partner about what you learned today.

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 _____

Do as many as you can in 90 seconds. Write the number of bonds you finished here:

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
11.	12.	13.	14.	15.
16.	17.	18.	19.	20.
21.	22.	23.	24.	25.

number bond dash 7!

Name _____

Date _____

Circle the part. Count on to show 8 with the picture and number bond. Write the expressions.

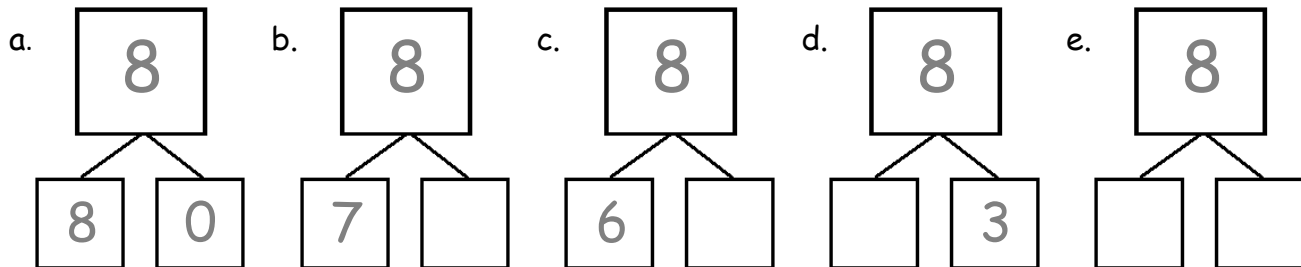
Circle 7

1. Circle 6. How many more does 6 need to make 8?

2. Circle 5. How many more does 5 need to make 8?

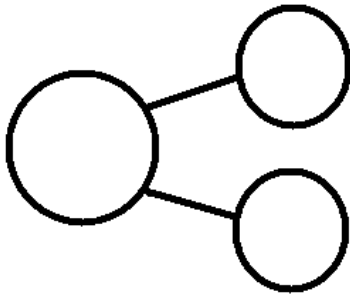
3. Circle 4. How many more does 4 need to make 8?

4. These number bonds are in an order starting with the biggest part first. Write to show which number bonds are missing.



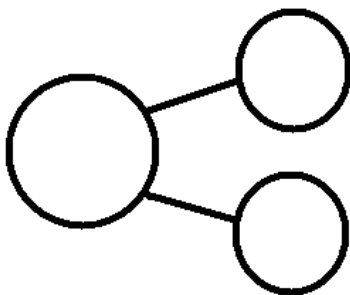
5. Use the expression to write a number bond and draw a picture that makes 8.

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



6. Use the expression to write a number bond and draw a picture that makes 8.

$$\boxed{8} + \boxed{0}$$

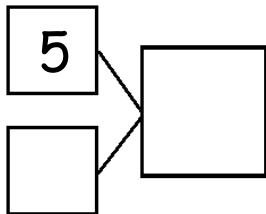


Name _____

Date _____

Fill in the missing part of the number bond, and count on to find the total. Then, write 2 addition sentences for each number bond.

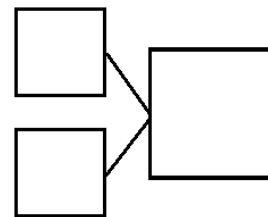
1.



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

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

2.



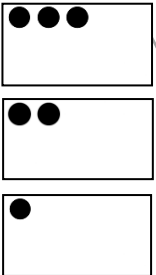
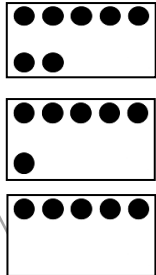
$$\square = \square + \square$$

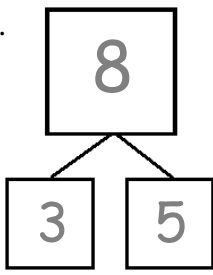
$$\square = \square + \square$$

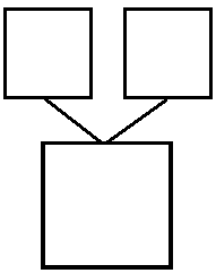
Name _____

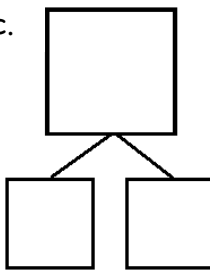
Date _____

1. Match the dots to show different ways to make 8. Then, draw a number bond for each pair.

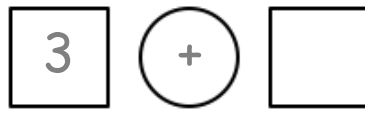
a.  

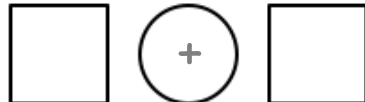
b. 

c. 

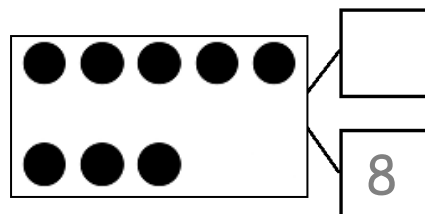
d. 

2. Show 2 ways to make 8. Use the number bonds above for help.



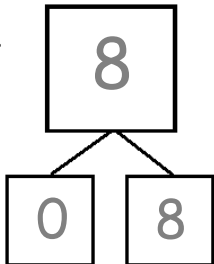
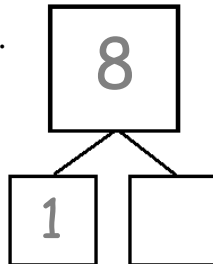
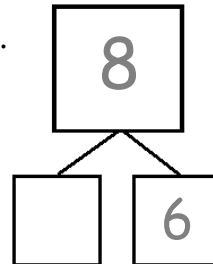
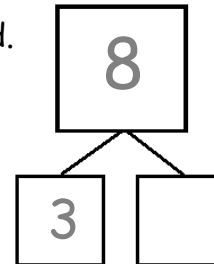
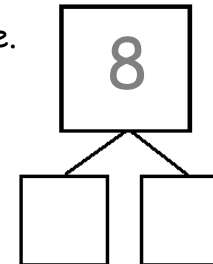


3. Fill in the missing number in the number bond. Write 2 addition sentences for the number bond you made. Notice where the equal sign is to make your sentence true.



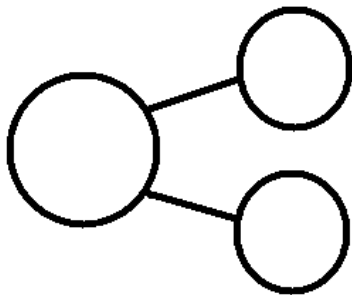
 

4. These number bonds are in an order starting with the smallest part first. Write to show which number bonds are missing.

a.  b.  c.  d.  e. 

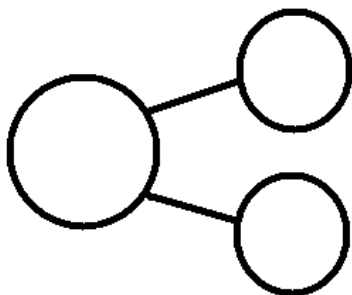
5. Use the expression to write a number bond and draw a picture that makes 8.

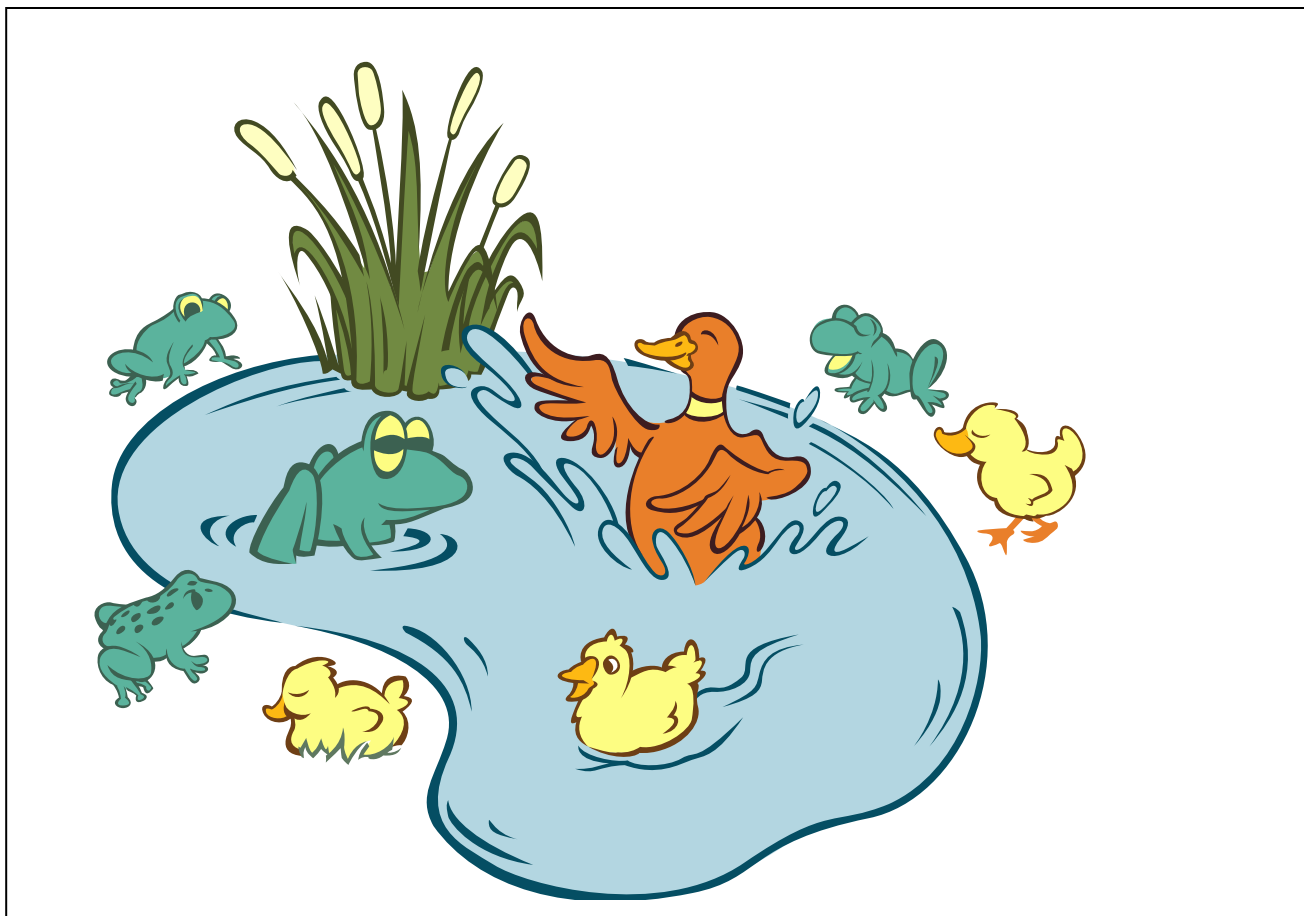
$$\boxed{2} + \boxed{6}$$



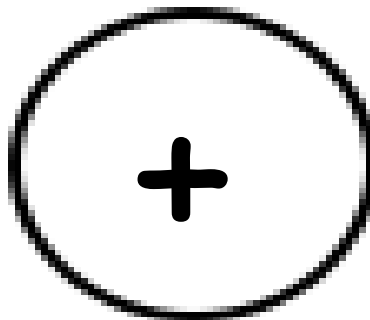
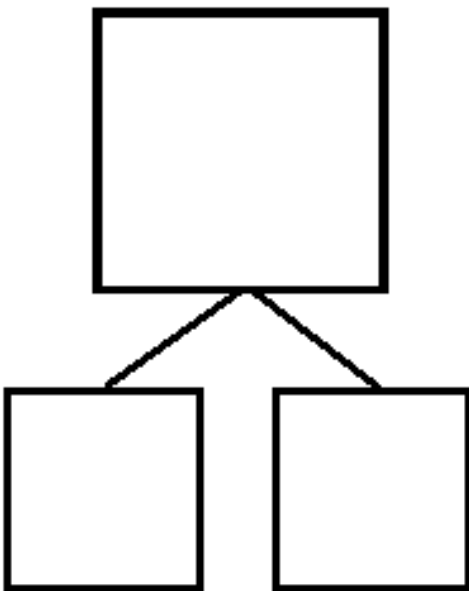
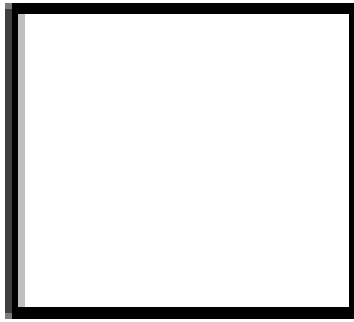
6. Use the expression to write a number bond and draw a picture that makes 8.

$$\boxed{0} + \boxed{8}$$





8 animals picture card



blank number sentence and number bond

Name _____

Date _____

Use your 5-group cards to help you write the expressions and number bonds to show all of the different ways to make 8.

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ways to make 8