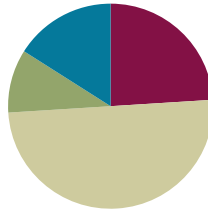


Lesson 38

Objective: Add 1 to numbers 1–9 to see the pattern of *the next number* using 5-group drawings and equations.

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)

- Core Fluency Differentiated Practice Sets **K.OA.5** (5 minutes)
- Imagine 1 More **K.OA.2** (3 minutes)
- Building 1 More and 1 Less Towers **K.CC.4c** (4 minutes)

Core Fluency Differentiated Practice Sets (5 minutes)

Materials: (S) Core Fluency Practice Sets (Lesson 29 Core Fluency Practice Sets)

Note: This activity assesses students' progress toward mastery of the required fluency goal for kindergarten: Add and subtract within 5.

Distribute the appropriate Practice Set based on student performance in Lesson 35. (All sets can be found in Lesson 29.) Students who correctly answered all questions on a Practice Set in the previous attempt should move to the next Practice Set. All other students should try to improve their scores on Practice Set A.

Students complete as many problems as they can in 96 seconds. Assign a counting pattern and start number for early finishers, or have them play an independent game like the Make 10 Memory Game (Lesson 28). Collect and correct any Practice Sets completed within the allotted time.

Imagine 1 More (3 minutes)

Materials: (T) Large 5-group cards (0–5) (Lesson 12 Fluency Template 2)

T: (Show the 2 dot card.) Raise your hand when you know how many dots. (Wait for all hands to go up, and then give the signal.) Ready?

S: 2.

T: Now, imagine that there is 1 more. Now how many dots with 1 more?

S: 3.

T: Say the addition sentence starting with 2. (Pause.) Ready?

S: $2 + 1 = 3$.

T: Flip it!

S: $1 + 2 = 3$.

To focus on the fluency goal of addition within 5, continue with the following suggested sequence: 3, 4, 1, and 0. If students are ready for a challenge, consider working up to 10.

Variation: Students can write the addition sentence on their personal white boards instead of answering verbally.

Building 1 More and 1 Less Towers (4 minutes)

Materials: (S) 10 linking cubes

Note: Students practice counting up and down by 1 *more* or 1 *less* to support the addition of 1 using 5-groups and equations.

Guide students through the process of building a tower while stating the pattern as 1 *more*. Maintain consistency in the language: (Place one block.) “1 more is 2.” (Place another block.) “1 more is 3.” (Place another block.) “1 more is 4.” Continue to 10.

Disassemble the tower while stating the pattern as 1 *less*. Challenge students to stop at a certain number, and then, change directions so that they state the pattern of 1 *more* or 1 *less* starting from numbers other than 1 or 10.

T: Take apart your tower while saying, “1 less.” Stop when you get to 5.

S: 10. 1 less is 9. 9. 1 less is 8. 8. 1 less is 7. 7. 1 less is 6. 6. 1 less is 5.

T: Stop! Now, put it back together while saying, “1 more.” Stop when you get to 7.

S: 5. 1 more is 6. 6. 1 more is 7.

T: Stop!

Continue changing directions several more times. It might be helpful to use a stick of cubes that shows a color change at 5 to facilitate identifying the number of cubes in the tower.

Application Problem (5 minutes)

Materials: (S) 10 linking cubes, small square of blue paper to represent a watering hole (optional)

Pretend your cubes are dinosaurs. 1 dinosaur went to the watering hole because he was thirsty. Move 1 of your cubes to the watering hole to show the thirsty dinosaur going to get his drink.



NOTES ON MULTIPLE MEANS OF REPRESENTATION:

To help English language learners follow the lesson, have pictures of dinosaurs and a watering hole on hand. This helps them to focus on the story of the Application Problem and the math.

1 more dinosaur got thirsty, too. Add another cube to the one by the watering hole. How many thirsty dinosaurs are there now? Turn to your partner, and talk about an addition sentence that would tell what you just did.

Another dinosaur got thirsty! Take her to the watering hole, too! Now how many dinosaurs are at the watering hole? Talk to your partner about the new addition sentence.

Keep acting out the story until all the dinosaurs are drinking water. Do you notice any patterns?

Note: Acting out the lesson objective with concrete materials gives students a conceptual understanding of the resulting number sentence, which is fundamental to discussions about patterns during the Concept Development.

Concept Development (25 minutes)

Materials: (T) Number path on the floor, large foam die (S) Number path (Lesson 37 Template), personal white board

T: Student A, please come up, and roll the die. What number did you get?

S: 4.

T: Show us the number 4 on the number path on the floor while the rest of the class finds it on their number paths. We want to add 1 to our number. Find the answer on your number paths, and raise your hand when you know. On my signal, you can tell me the answer together.

S: 5.

T: Yes! We need to make a number sentence. Let's write and read the number sentence together.

S: $4 + 1 = 5$.

T: Good. Student B, please come up, and roll the die.

S: I got a 6.

T: Show us the number 6 on the number path on the floor while the rest of the class finds it on their number paths. We want to add 1 to our number. Find the answer on your number paths, and raise your hand when you know. On my signal, you can tell me the answer together.

S: 7.

T: Read and write the number sentence.

S: $6 + 1 = 7$.

Repeat the activity several times, having students act out and record the equation each time. Continue to list the equations on the board as well.

T: Does anyone notice any patterns?

MP.8 S: We just hopped to the next number each time on the path. → We added 1 on each time. → It's like finding the next bigger number.



NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Scaffold the lesson for students with disabilities by providing them with linking cubes to use with their personal white boards and number path template. Allow students to use the manipulatives until they are ready to work without them.

MP.8

- T: I like your ideas! Turn your boards over to the blank side. We are going to talk about the pattern some more.
- T: Draw 1 dot in the 5-group way. Now, draw an empty circle next to it to show that we are adding 1. (Demonstrate.) How many circles do we have now?
- S: 2.
- T: What is our number sentence?
- S: $1 + 1 = 2$.
- T: Write your number sentence next to your picture. Now, draw 2 the 5-group way. Draw an empty circle next to it to show that we are adding 1 again. (Demonstrate.)
- T: How many now?
- S: 3.
- T: What is the number sentence?
- S: $2 + 1 = 3$.
- T: Yes! Write that number sentence under the picture. Now, work with your partner to see if you can keep going with the pattern until you have 10 dots in all. Don't forget to draw the picture and write your number sentence each time. (Circulate during the exercise to ensure that students understand. Consider asking pairs of students to present their work on chart paper or on the board.)
- T: Who would like to tell something about patterns they noticed in their work?
- S: It is like what we did on the number path. → When you are adding 1, the answer is always just the next number! → 1 more is the same as plus 1.
- T: Let's read all of the number sentences that you made!
- S: $1 + 1 = 2$; $2 + 1 = 3$; $3 + 1 = 4$, ...

$1 + 1 = 2$	• •
$2 + 1 = 3$	• • •
$3 + 1 = 4$	• • • •
$4 + 1 = 5$	• • • • •
$5 + 1 = 6$	• • • • • •
$6 + 1 = 7$	• • • • • • •
$7 + 1 = 8$	• • • • • • • •
$8 + 1 = 9$	• • • • • • • • •
$9 + 1 = 10$	• • • • • • • • • •

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: Add 1 to numbers 1–9 to see the pattern of the *next number* using 5-group drawings and equations.

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

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 38 Problem Set K•4

Name: Tuday Date: 2-27-19

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

Use the number path to add. Write the number in the box. Color the circles to match. Use a different color to show 1 more.

$1 + 1 =$	<u>2</u>	• • • • •
$2 + 1 =$	<u>3</u>	• • • • •
$3 + 1 =$	<u>4</u>	• • • • •
$4 + 1 =$	<u>5</u>	• • • • •
$5 + 1 =$	<u>6</u>	• • • • •

COMMON CORE Lesson 38: Add 1 to numbers 1–9 to see the pattern of the next number using 5-group drawings and equations. 10/2/13 engage^{ny} 4.M.8

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 first page of your Problem Set. Do your 5-groups look exactly like your partner's? Why or why not?
- Look at the last two problems. Do your 5-groups and number sentences look exactly like your partner's? Why or why not?
- How is using the number path like using 5-group drawings? Which one do you like to use more? Why?
- Think back to building *1 more* and *1 less* towers. How are counting forward and adding 1 the same?
- Imagine that you are talking to an alien who does not know about adding 1. How would you tell the alien about what we did today? How would you describe the pattern we found?
- Think about the thirsty dinosaurs in our Application Problem. Was there a pattern in your addition sentences for that problem?

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 38 Problem Set K•4

$6 + 1 = \boxed{7}$	
$7 + 1 = \boxed{8}$	
$8 + 1 = \boxed{9}$	
$9 + 1 = \boxed{10}$	
Fill in the number sentences. Color the circles.	
$\boxed{6} + 1 = \boxed{7}$	
$\boxed{3} + 1 = \boxed{4}$	

COMMON CORE Lesson 38: Add 1 to numbers 1–9 to see the pattern of *the next number* using 5-group drawings and equations. 10/2015 engage^{ny} 4.R.7

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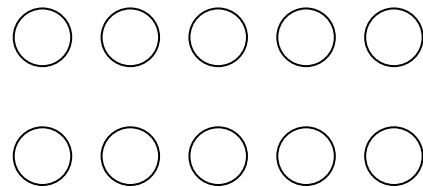
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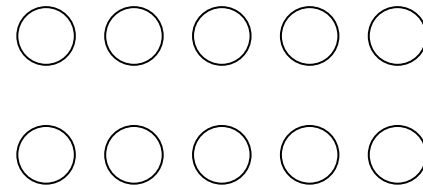
1	2	3	4	5	6	7	8	9	10
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Use the number path to add. Write the number in the box. Color the circles to match. Use a different color to show 1 more.

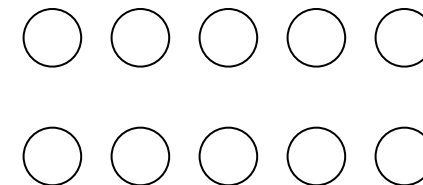
$$1 + 1 = \square$$



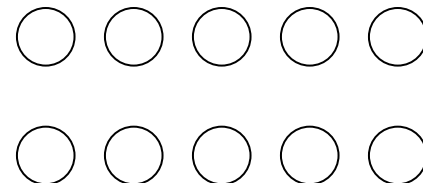
$$2 + 1 = \square$$



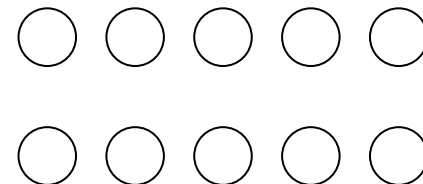
$$3 + 1 = \square$$



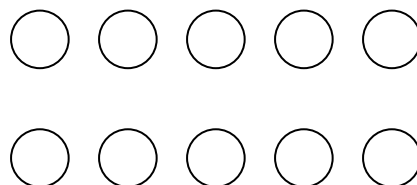
$$4 + 1 = \square$$



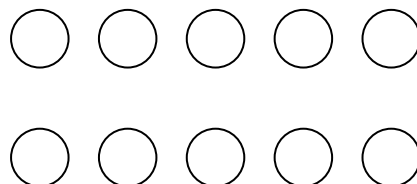
$$5 + 1 = \square$$



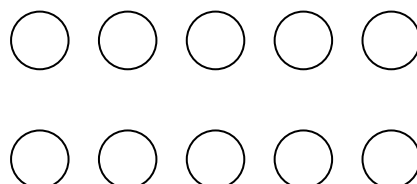
$6 + 1 =$



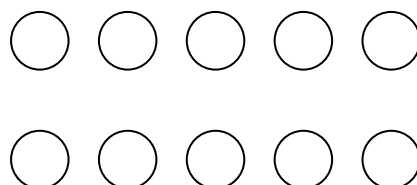
$7 + 1 =$



$8 + 1 =$

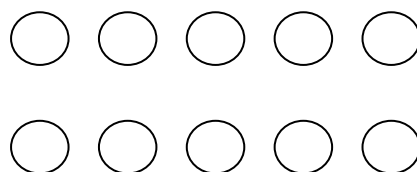


$9 + 1 =$

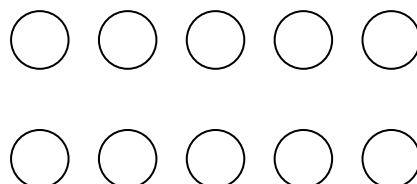


Fill in the number sentences. Color the circles.

$\square + 1 =$



$\square + 1 =$

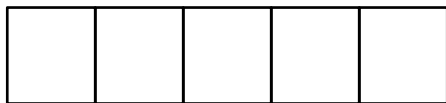


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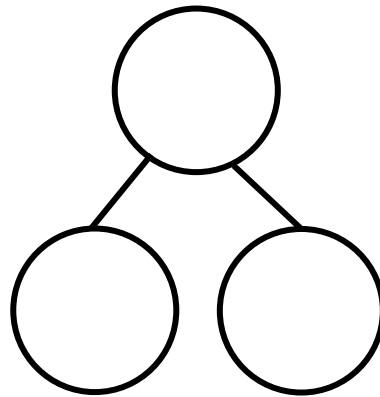
Date _____

Follow the instructions to color the 5-group. Then, fill in the number sentence or number bond to match.

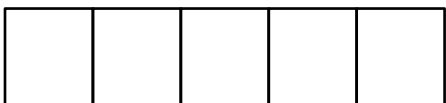
Color 9 squares green and 1 square blue.



$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

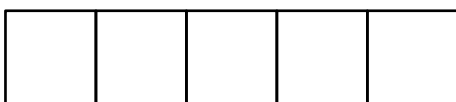
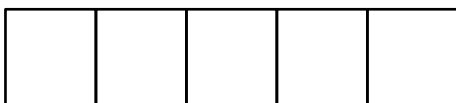


Color 8 squares green and 1 square blue.

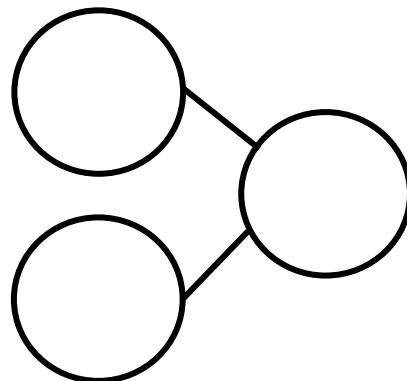


$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

Color 7 squares green and 1 square blue.



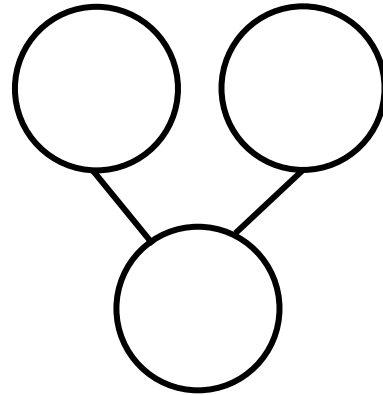
$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$



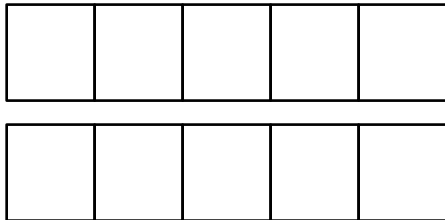
Color 2 squares green and 1 square blue.



$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

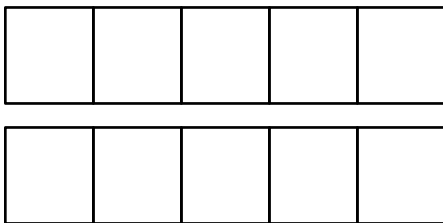


Color 1 square green and 1 square blue.

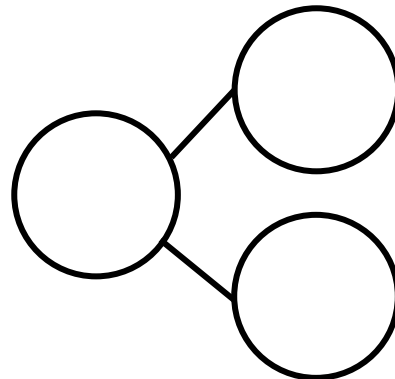


$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

Color 0 squares green and 1 square blue.



$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$



Subtract.

$$4 - 1 = \boxed{} \quad 3 - 1 = \boxed{} \quad 2 - 1 = \boxed{} \quad 1 - 1 = \boxed{}$$