

Week 2 Lesson 1: Strategize to compare two sets.

Standard(s) Covered:

K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality.

- a. When counting objects, say the number names in the standard order, using one-to-one correspondence.
- b. Recognize that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- c. Recognize that each successive number name refers to a quantity that is one greater.

K.CC.B.5 Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, a circle, or as many as 10 things in a scattered configuration. Given a number from 1-20, count out that many objects.

K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.

K.CC.C.7 Compare two given numbers up to 10, when written as numerals, using the terms greater than, less than, or equal to.

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	26 minutes
Student Debrief	8 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.

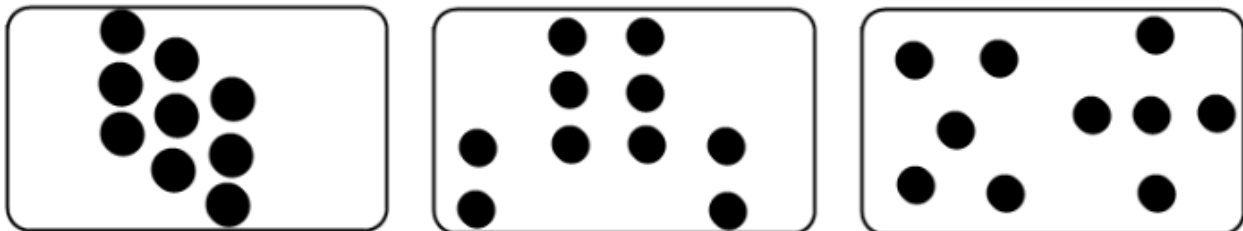
K.OA.A.4 Find the number that makes 10, when added to any given number, from 1 to 9 using objects or drawings. Record the answer using a drawing or writing an equation.

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 40. We start counting and each person counts on as we go around the circle. If you say the designated number of the day (40), 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=0gwC2Juklts>

Activity #1 Application Problem

Materials: (S) Pattern blocks, small bucket per pair

Work with a partner. Take one handful of pattern blocks out of the bucket. Let your partner do the same.

Compare your handfuls of pattern blocks. Who has more? How do you know? Put the blocks back, and try the game again.

Note: Circulate during this time to observe student strategies for comparing the sets of blocks. Do the students line them up? Do they match them in pairs? Do they count them? Gather information about their existing strategies to guide your discussions in today's lesson.

Teacher Notes:

- Circulate during this time to observe student strategies for comparing the sets of blocks. Do the students line them up? Do they match them in pairs? Do they count them? Gather information about their existing strategies to guide your discussions in today's lesson.
- Extend learning for students working above grade level by challenging them to explain, either orally or in writing, how they knew who had more pattern blocks. Ask them to think of another strategy they can use to determine who has more pattern blocks.

Activity #2 Concept Development

Materials: (T) 2 sets of student materials (S) 10-sided die, bag of 10 linking cubes, bag of 10 beans, bag of 10 pennies, bag of 10 counters per pair

T: We are going to do some more comparing activities together, and then you will repeat them with your partner. Watch carefully. Student A, please come up to help.

T: I am going to roll the die and take that many cubes out of the bag. You do the same. (Demonstrate.) What would be a simple way to see who has more?

S: Make towers!

T: (Demonstrate.) Student A, how many cubes are in your tower?

S: 6.

T: I have 8. Let's see whose tower is taller. Which is more, 8 or 6?

S: 8.

T: 8 is more than 6. Use your words.

S: 8 is more than 6.

T: Now, you and your partner try the game. (Allow time for comparison and discussion. Continue to encourage the language of *more than* and *less than*.)

T: Put the cubes away, and watch our next game. Student B, please come up to help. Student B and I will each take some pennies out of our bag. (Demonstrate.) How can we see who has more?

S: Line them up!

T: We will make rows of our pennies. (Demonstrate.) Student A, how many pennies do you have?

S: 9.

T: I have 3. Let's make pairs, and then move our pennies. (Demonstrate.) Who has fewer?

S: You do! You only had 3.

T: 3 is less than 9. Use your words.

S: 3 is less than 9.

- T: Thank you, Student B! You and your partner can play the game now. Line up your pennies each time to find out who has more. (Allow time for comparison and discussion.)
- T: Put your pennies away. Take out your bag of beans. Roll the die to find out how many beans will be in your set. Compare your set with your partner's. Who has more? How do you know? (Circulate during the lesson to observe strategies of comparison. Encourage students to use multiple strategies and to use *more than* and *less than* vocabulary in their discussions.)

Teacher Notes:

- Ask students to verbalize who has more as they take turns every time they play the game. For example, "I have 8 cubes, and you have 3 cubes; 8 is more than 3." Or, "I have 4 pennies, and you have 7 pennies; 4 is less than 7." English language learners benefit from the practice and can be easily observed as to which students might be confused between *more* and *less*.

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.

Problem Set

Name _____

Date _____

Draw a tower with
more cubes.

_____ is more than _____.



Draw a train with
fewer cubes.

_____ is less than _____.



Draw a tower with
more cubes.

_____ is more than _____.



Draw a train. Draw another train with fewer cubes.

_____ is more than _____. _____ is less than _____.

Student Debrief

Lesson Objective: Strategize to compare two sets.

On the back, draw a tower, and then make another tower with fewer cubes.

pn
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.

- How did we compare our sets with the linking cubes? What is another way we could have compared them?
- What do you think was the easiest way to find out which bean set had more? Would you do the same thing to find out which set had fewer beans?
- When do you need to count to see which set has more or less?
- When might we compare numbers in our lives?
- What math vocabulary did we use today to communicate precisely?
- How did the Application Problem connect to today's lesson?

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 lessons. The questions may be read aloud to the students.

Exit Ticket

Name _____

Date _____

Roll a die, and draw a set of objects to match the number rolled. Write the number in the box. Roll the die again, and do the same in the next box. Use the words *more than* to compare the numbers.

	<input type="text"/>
	<input type="text"/>

_____ is more than _____.

	<input type="text"/>
	<input type="text"/>

_____ is more than _____.


	<input type="text"/>
	<input type="text"/>

_____ is more than _____.

Additional Practice

Name _____


Date _____

	
--	--

Draw a train with more cubes.

_____ is more than _____.

_____ is less than _____.



On the back, draw a tower. Draw another tower that has more cubes.

_____ is more than _____. _____ is less than _____.