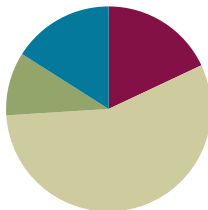# Lesson 13

Objective: Show, count, and write to answer *how many* questions in linear and array configurations.

Suggested Lesson Structure

■ Fluency Practice   (9 minutes)
■ Application Problem   (5 minutes)
■ Concept Development   (28 minutes)
■ Student Debrief   (8 minutes)

Total Time   **(50 minutes)**

Fluency Practice (9 minutes)

▪ Count the Say Ten Way **K.NBT.1**   (3 minutes)
▪ Show Teen Numbers **K.NBT.1**   (3 minutes)
▪ Write Teen Numbers with Tower Configurations **K.CC.3**   (3 minutes)

Count the Say Ten Way (3 minutes)

Note: Counting up and down prepares students to count and answer *how many* questions accurately in the Concept Development.

     T: Let's count the Say Ten Way.

Guide the students to count forward and backward between 10 and 20.

Show Teen Numbers (3 minutes)

Materials: (S) Two sticks of 10 linking cubes that are different colors

Note: This activity gives students continued practice with counting in linear configuration and guides students to efficiency with the color change at 10.

     T: There are 10 cubes on each of your sticks. Connect your 2 cube sticks.
     S: (Students connect cube sticks.)
     T: Say the number the Say Ten Way.
     S: 2 tens.
     T: Take away 1 cube, and put it on the carpet space in front of you.
     S: (Students do so.)

T: Say how many you have now the Say Ten Way.

S: Ten 9.

T: Say how many you have the regular way.

S: Nineteen.

Repeat process for three or four other teen numbers.

Write Teen Numbers with Tower Configurations (3 minutes)

Materials: (T) One stick of 10 linking cubes that are the same color, 10 loose cubes of a different color
(S) Personal white board

Note: The color change, along with the Say Ten Way, supports students in accurately writing teen numbers.
Guide students to recognize groups of cubes as ten ones and some ones, rather than count all.

T: (Hold a tower of 12 connected linking cubes, with the bottom 10 a different color than the top 2.)
Write the number on your personal white board.

S: (Students write 12.)

T: Say the number the Say Ten Way.

S: Ten 2.

T: Say the number the regular way.

S: Twelve.

Repeat process for several other teen numbers.

> **NOTES ON**
> **MULTIPLE MEANS**
> **OF ENGAGEMENT:**
>
> Provide students with disabilities learning aids in the form of counters to model the Application Problem. Give them a number bond template to complete the task. Scaffolding the Application Problem allows students with disabilities to complete the task and focus on the lesson.

Application Problem (5 minutes)

Vincent's father made 15 tacos for the family. Show the 15 tacos as 10 tacos and 5 tacos. Draw a number bond to match.

Note: This Application Problem is a simple experience of decomposition (**K.NBT.1**). We can ask students to draw the decomposition in 5-groups, another name for a ten-frame configuration, but which has the advantage of emphasizing the five.
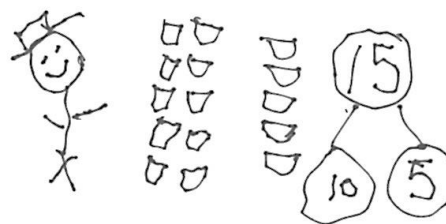
Concept Development (28 minutes)

Materials: (S) 2 sticks of 10 linking cubes with a color change at five, personal white board, per student, personal Rekenrek (from Lesson 10), set of Hide Zero cards (Lesson 6 Template) per pair of students

T: Count in order from 1 to 20.

S: 1, 2, 3,…20.

T: Count from 10 to 20 the Say Ten Way.

S: Ten 1, ten 2, ten 3, ten 4, ten 5, ten 6, ten 7, ten 8, ten 9, 2 tens.

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T: Partner A, show the number that is one more than 13 on the Rekenrek.

T: Partner B, show the number that is one more than 13 with the Hide Zero cards.

T: Check that you are each showing the same number. What is the number?

S: 14.

T: Count from 14 up to 20.

S: 14, 15, 16, 17, 18, 19, 20.

T: Partner B, show the number that is one more than 7 on the Rekenrek.

T: Partner A, show the number that is one more than 7 with the Hide Zero cards.

T: What is the number?

S: 8.

T: Count from 8 up to 20.

> **NOTES ON MULTIPLE MEANS OF REPRESENTATION:**
>
> Review the term *one more* with English language learners by modeling it. Show two linking cubes, and say "one more" as you add another cube to the two. Practice asking *how many* questions, and count with them until they get accustomed to answering the question.

Repeat with two more numbers so that each partner uses both representation tools a second time.

T: (Pass out the linking cubes.)

Have students connect the linking cubes to create a continuous number train to 20. Have them count to see they have 2 sticks of 10 ones.

T: Show me ten 7 cubes.

T: (Allow students time to finish.) How many cubes is that?

S: Ten 7. → Seventeen!

T: Make your long number train of 2 sticks of 10 again. Break it, and put 1 stick below the other. How many cubes do you have now?

S: (Count again, as needed.) 10 here and 10 here. → 2 tens. → Twenty!

Have students break the linking cube sticks at the color change. Have them place the shorter sticks one below the other. Guide students to place the sticks in four rows and recount the cubes from left to right starting from the top with number 1 and continuing this way to the fourth row of 16 to 20. Have them recount to get better at it. They will enjoy the chance to recount.

T: (Allow students time to finish.) How many cubes did you count?

S: 20.

T: (Revisit the process.) Put the sticks back into one train from 1 to 20. Count. Break the stick into two sticks of 10 cubes. Count. Break the sticks to make 4 sticks of 5. Count.

T: (Allow students time to finish.) How many cubes do you have now? Count to check.

S: 20.

Before doing the Problem Set, give the students a personal white board or blank paper, and have them use their 10-sticks to draw what they just did in the lesson.

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Problem Set (7 minutes)

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

Student Debrief (8 minutes)

Lesson Objective: Show, count, and write to answer *how many* questions in linear and array configurations.

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

Have students always check their work with a partner once they bring it to the carpet. Encourage them to notice, if they don't, that the number of ducks is the same. Ask: "How do they look different?" "Is there another way we can put the 16 ducks?"

Be sure they compare how they showed 15 and 12 in rows in the last two problems. Then, possibly discuss:

- T: Count the cubes as I lay them down. (Place 10 ones in a horizontal line.)
- S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.
- T: What is one more than 10? (Add a cube.)
- S: 11.
- T: One more than 11? (Add a cube.)
- S: 12.
- T: How many cubes do you see?
- S: 12.
- T: (Slide the cubes into a vertical line.) Do I still have 12 cubes? How do you know?
- T: (Slide the cubes into different rectangular array configurations, asking after each change, "How many do I have now?")

Guide students to see that the number of objects is the same regardless of how they are arranged. Let them close the lesson by showing 12 cubes in different rows to a partner. (Rows do not have to be complete.)

Exit Ticket (3 minutes)

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.

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Name _____ Date _____

The ducks found some tasty fish to eat in the boxes!
Count up on the number path.

Write the missing numbers for the boxes that have a duck on top.
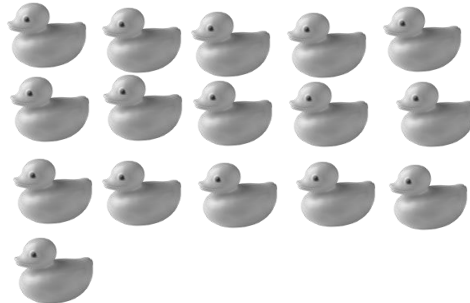
| 11 | | 13 | | 15 | | 17 | | 19 | |

_____ _____ _____ _____ _____

Write the missing numbers for the boxes that have a duck on top.

| | 12 | 13 | 14 | | | 17 | 18 | | |

_____   _____ _____   _____ _____

COMMON CORE

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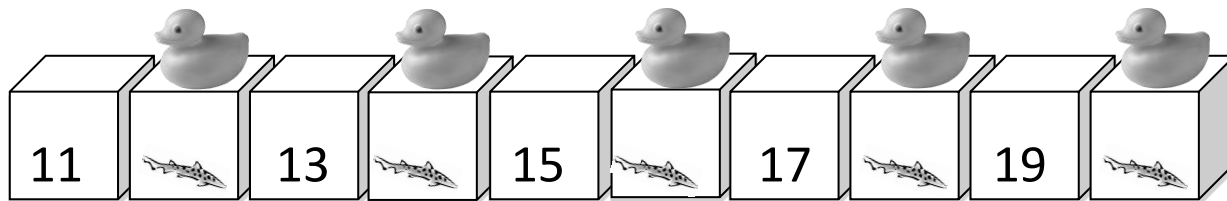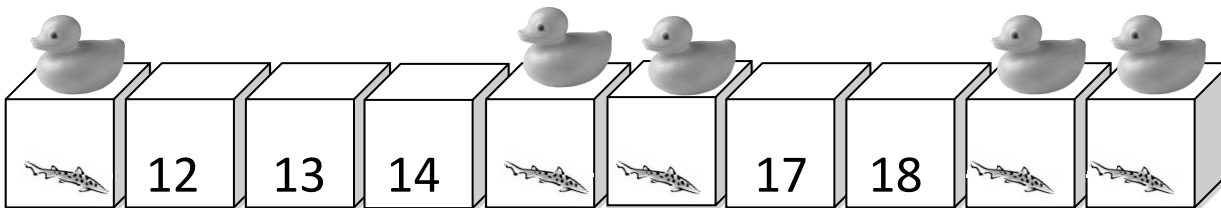
How many ducks do you count?

_____   _____
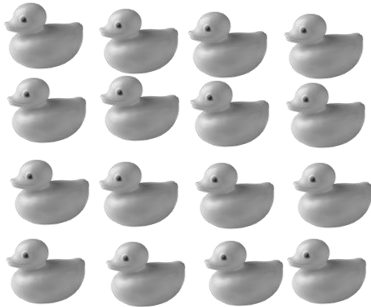
In the space below, draw 15 circles in rows.

In the space below, draw 12 squares in rows.

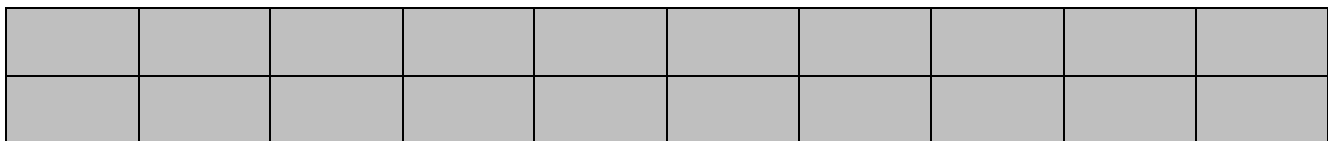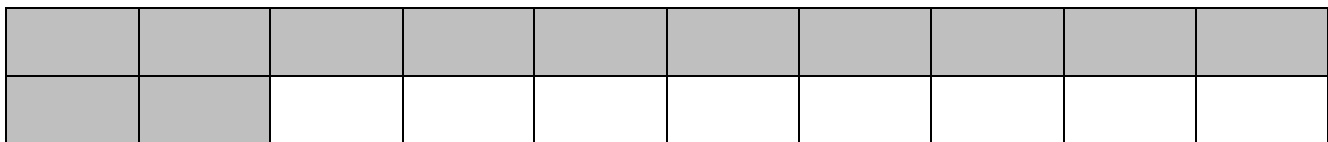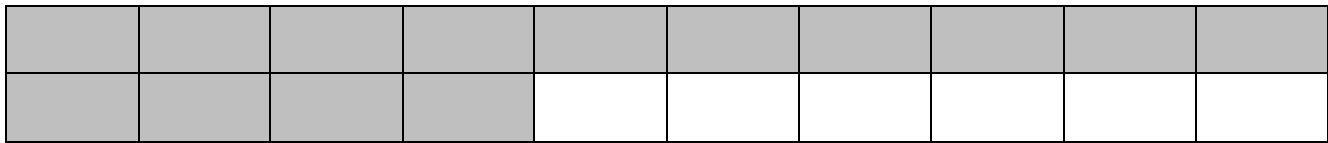Name _____   Date _____

Count and write how many.

☆ ☆ ☆ ☆
☆ ☆ ☆ ☆
☆ ☆ ☆ ☆   _____

Look at the 3 sets of blocks below. Count the shaded blocks in each set.
Circle the set that has the same number of shaded blocks as stars.

Early finishers: Which was easier to count, stars or blocks? Why?

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Name _____   Date _____

Count the objects. Draw dots to show the same number on the double ten-frames.

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