LESSON 1

Objective

Compose numbers from 11 to 19 in tens and ones.

Common Core State Standards

- **K.NBT.1** Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Number and Operations in Base Ten

Compose Numbers 11–19

Early number sense is a predictor of a child's success in later mathematics courses. An understanding of the base ten system is critical in the development of a child's number sense. As children explore and discover the numbers 11 to 19, they need to understand that these numbers are composed of one ten and a number of ones. Using concrete objects to build a ten and count ones will help children visualize and conceptualize each number from 11 to 19 as one ten and a number of ones. This type of understanding will be important as children begin to perform addition and subtraction that requires regrouping.

Try It! *Perform the Try It! activity on the next page.*

Talk About It

Discuss the Try It! activity.

- **Ask:** *How many white Snap Cubes® do you have?* **Say:** *Let's count on from ten to count the blue cubes.* Have children point to each blue cube as you count: 11, 12, 13, 14.
- **Ask:** *How many Snap Cubes do you have in all?* **Say:** *Ten ones and four ones make fourteen.*
- **Say:** *We can write a number sentence to show this problem. As you write 10 + 4 = 14 on the board,* **say:** *We write ten to show the number of white socks. We write a plus sign to show we're adding. We write four to show the number of blue socks. Ten plus four is equal to (or is the same as) fourteen.*

Solve It

With children, reread the problem. Have them draw 10 white socks and 4 blue socks. Have them circle the white socks and write 10. Then have them count on from 10 writing 11, 12, 13, and 14 under the blue socks as children count them. Have them write the equation 10 + 4 = 14 under their picture.

More Ideas

For other ways to teach composing numbers 11 to 19—

- Have children use Snap Cubes with the Ten-Frame Worksheet (BLM 4). Give children a number from 11 to 19 and have them fill the first ten frame with one color of cubes as they count to 10. Then have them count on from 10 as they place cubes of another color in the second ten frame until they reach the given number.

Formative Assessment

Have children try the following problem.

Circle 10 socks. Ten ones and 5 more ones make how many ones?

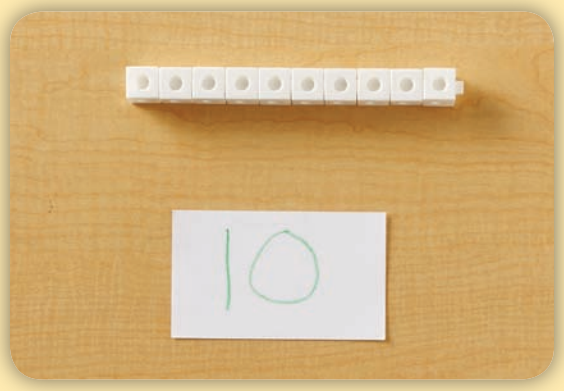
Try It! 15 minutes | Groups of 4

Here is a problem about composing numbers 11 to 19.

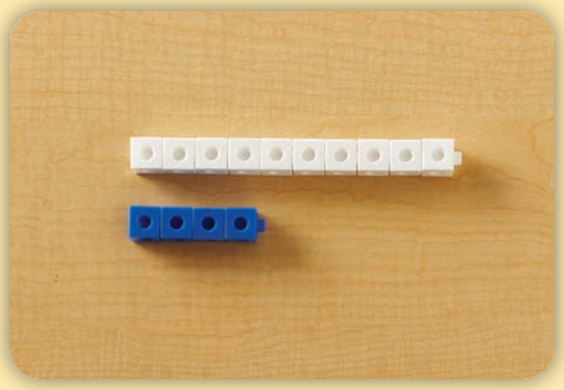
Lia has 10 white socks and 4 blue socks. How many socks does she have in all?

Introduce the problem. Then have children do the activity to solve the problem. Distribute Snap Cubes to children.

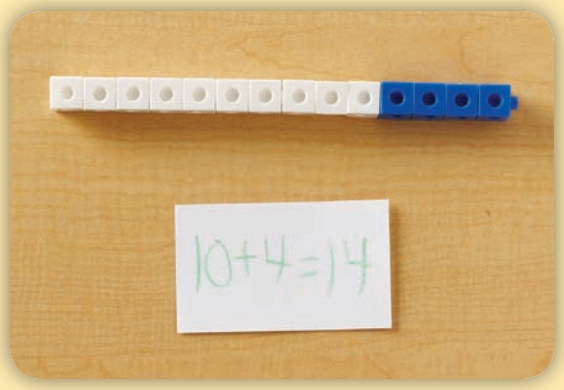
Materials
- Snap Cubes®
- index cards



1. Ask: *How many white socks does Lia have?* **Say:** *Let's use the Snap Cubes to show Lia's socks.* Have children count 10 white Snap Cubes and snap them together. Have children label the white train with the numeral 10 on an index card.



2. Ask: *How many blue socks does Lia have?* Have children count 4 blue Snap Cubes and snap them together.



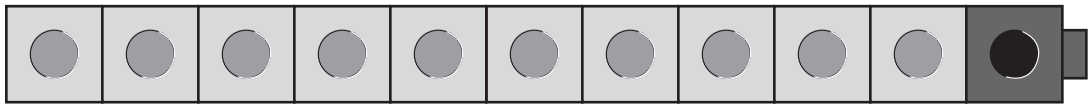
3. Say: *We want to help Lia find out how many socks she has in all.* **Ask:** *How can we determine how many socks Lia has?* Elicit from children that they need to join the blue cubes to the white cubes and count them all. Have children snap the 4 blue cubes to the white cubes to count them. Have children write the addition sentence 10 + 4 = 14 on an index card.

⚠ Look Out!

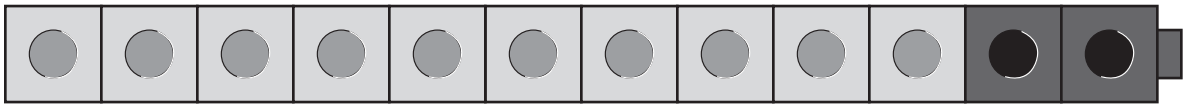
Watch for children who do not have 10 white cubes snapped together. Have partners count the white cubes together to make sure they have 10. You might assist these children by using the Ten-Frame Worksheet (BLM 4) to help them visualize making a 10. Then have children snap all 10 white Snap Cubes together before joining with the four blue Snap Cubes.

Answer Key

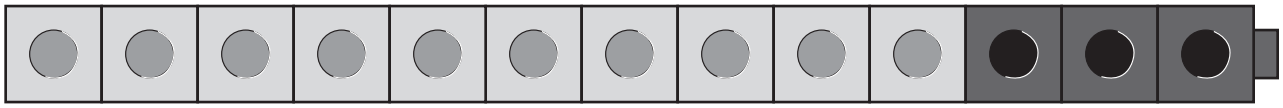
1.



10 + 1 = 11



10 + 2 = 12



10 + 3 = 13

2. 16 Check children's work.

10 + 6 = 16

Directions

1. Use Snap Cubes®. Make the models shown. Fill in the number sentence for each row. **2.** Use Snap Cubes. Build the number 16 with 10 yellow cubes and some blue cubes. Draw your cubes. Fill in the number sentence.

Answer Key

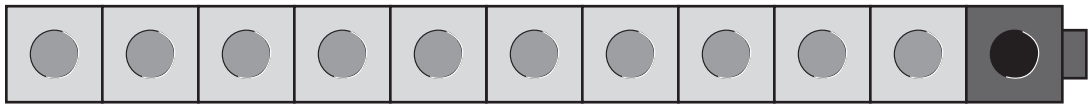
Check children's work.

Challenge

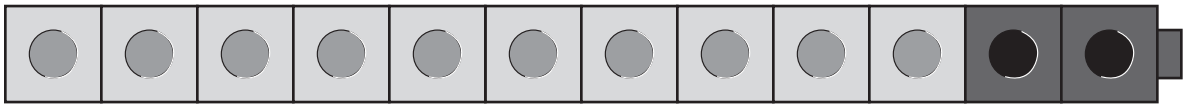
Draw a train of 10 Snap Cubes® and color them red. Draw a train of 5 cubes and color them green. Write how many cubes there are in all.

Name _____

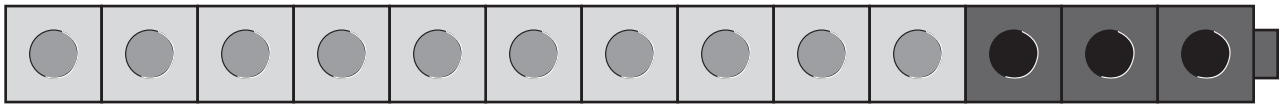
1.



10 + _____ = 11



10 + _____ = 12



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