2

Groups of 0 to 5

Objective

Identify a number for a group of 0 to 20 objects.

Common Core State Standards

■ **K.CC.3** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). Count to tell the number of objects.

■ **K.CC.5** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. Compare numbers.

Representing numbers with various physical materials and relating them to number words and numerals is a major part of mathematics instruction in the early elementary grades. As children gain understanding of numbers and how to represent them, they build a foundation for understanding relationships among numbers.

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

Talk About It

Discuss the Try It! activity.

■ Hold up Number Card 3 (BLM 2). **Ask:** *What number is this?* **Say:** *Show me 3 fingers.* **Ask:** *How do you know how many fingers to hold up?* Repeat for the other numbers.

■ **Ask:** *What does a group of zero look like?* **Say:** *Show me with your hands.*

Solve It

With children, reread the problem. Then have children pretend that they are going on a field trip. Ask them to arrange themselves in groups of 5. Have them draw a picture showing all the children in their group and label it using numerals.

More Ideas

For other ways to teach about identifying and representing numbers—

■ Give children instructions for making groups using specific numbers and colors of Snap Cubes®; for example, **say:** *Make a group of 14 blue cubes. Make a group of red cubes that is the same as the group of blue cubes. Make a group of 0 green cubes.*

■ For children needing extra help with 0, have them count out 5 counters into a paper cup, then count backward to 0 as they remove each counter from the cup. Guide children to understand that now that there are 0 counters in the cup, the cup is empty.

Formative Assessment

Have children try the following problem.

Draw dots to match each number card. The first one has been done for you.

| 5 | 3 | 1 | 4 |

Try It! 30 minutes | Pairs

Here is a problem that relates to groups of 0 to 20.

The children are going to see a musical at another school. Before boarding the bus for their trip, their teacher holds up a card with the number 5 and says, "Yesterday we learned about the number 5. Before we go, I need everyone to line up in groups of 5." How will the children know what to do?

Introduce the problem. Then have children do the activity to solve the problem.

Give Snap Cubes, crayons, Number Cards (BLM 1), and 20 blank index cards to each pair of children.

Materials
- Snap Cubes® ($\frac{1}{2}$ set per pair)
- Number Cards (BLM 2; 1 set per pair)
- index cards (20 per pair)
- crayons (1 per child)
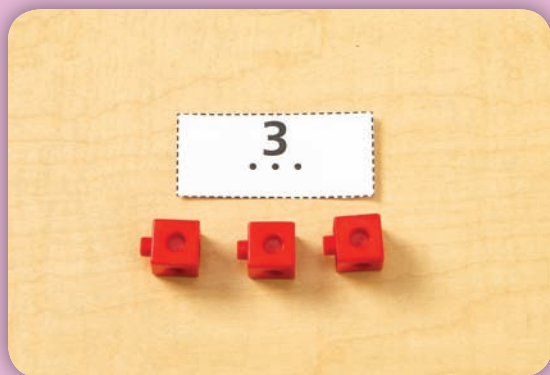
1. Help children place the Number Cards facedown on the table. To begin, have a child from each group pick a card and make a group of cubes to represent that number.

2. Now ask the other children to check their partner's work by counting the cubes again. Have them write the corresponding numeral on a blank index card.
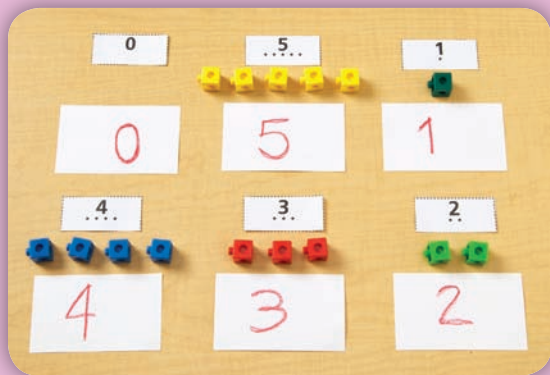

3. Have children switch roles. Encourage children to continue working until all Number Cards have been used.
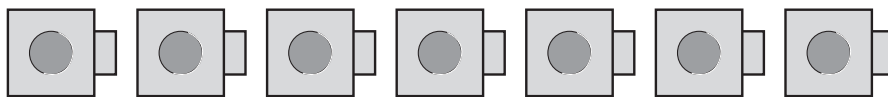
⚠ Look Out!

Watch for children who cannot create a group for a specific number. Have them count forward from 1 as they touch each cube. Also, watch for children who count the same cube twice. Have them line up the cubes in one row and count them from left to right.
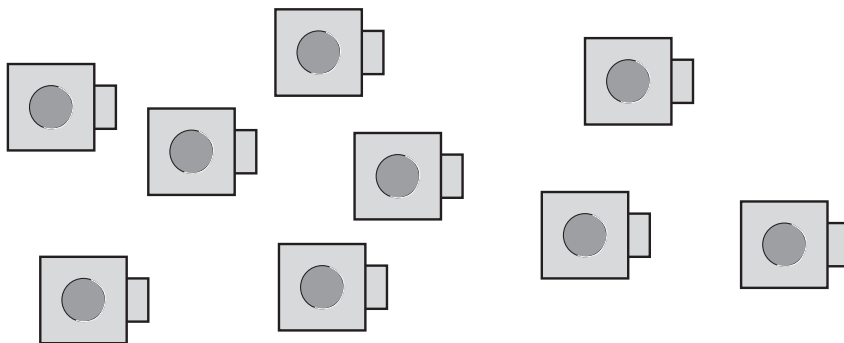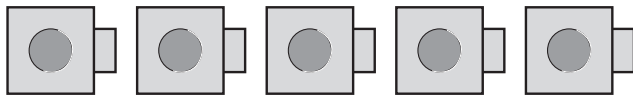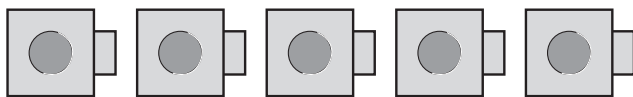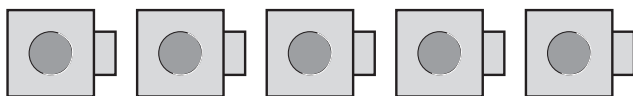
1.

[group of 4 cubes] _____ 4

[group of 7 cubes]

_____ 7

[scattered group of 9 cubes]

_____ 9

2.
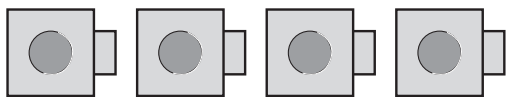
[array of 15 cubes] _____ 15

Directions

1. Write the number for each group of cubes. **2.** How many cubes are there? Write the number.
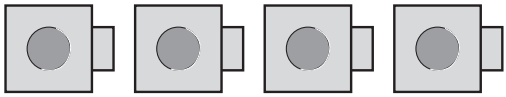
Answer Key

Challenge

Draw a group of 6 yellow cubes. Draw a group of 11 green cubes. Draw a group of 0 red cubes. Write the number of yellow cubes. Write the number of green cubes. Write the number of red cubes.
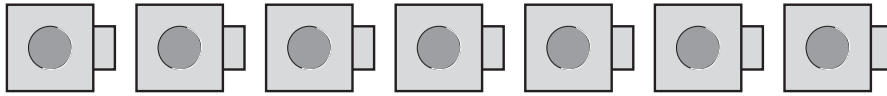
Name _____

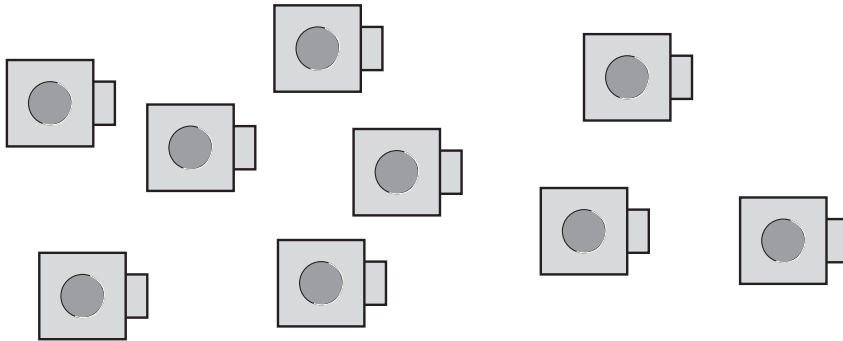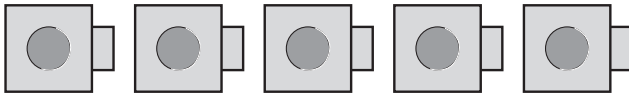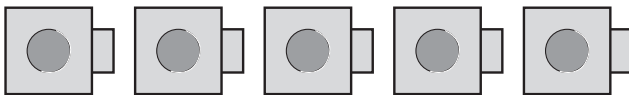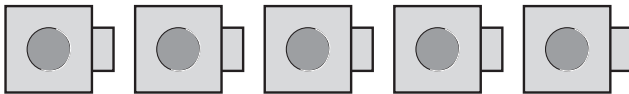**1.** _____

_____

_____

2. _____

Directions
1. Write the number for each group of cubes.   **2.** How many cubes are there? Write the number.

Name _____

Challenge

Draw a group of 6 yellow cubes. Draw a group of 11 green cubes. Draw a group of 0 red cubes. Write the number of yellow cubes. Write the number of green cubes. Write the number of red cubes.

✂

0	
1 •	**2** ••
3 • • •	**4** • • • •
5 • • • • •	**6** • • • • • •
7	**8**
9	**10**

Name _____

✂

11	12
13	14
15	16
17	18
19	20

BLM 2   Number Cards