

# Hiding Bears

## A Lesson for Grades K–2

This lesson was adapted from the Math Solutions publication *Teaching Number Sense, Kindergarten* by Chris Confer.

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### Math Goal

The ability to decompose numbers is a characteristic of well-developed number sense and indicates a student's understanding of relationships among numbers.

This lesson is being done as an assessment to determine what the students understand about decomposing numbers, and the level of number they've internalized well enough to understand the inclusion of other numbers within that number.

### Anticipating Confusion

Plan to begin the exploration using five bears. This number may be too large for some, or even most, of the students. Be prepared to adjust the numbers as needed. This lesson might best be done with a small group of students at a time. Begin with the whole group, though, and gather as much evidence of student understanding as possible.

### Planning Questions

As students play the game, continue to ask how they know the number of bears hiding in the cave. Even though students are working with the same number, the level of sophistication of their strategy will determine next steps for each student.

### Classroom Talk Combinations

- Whole group
- Partner

### Materials

- Bear book
- Number cards (See Reproducible)
- Approximately 100 teddy bear counters (or other suitable counters)
- 12 opaque paper cups
- Chart paper



## Lesson Implementation

### Introduction

1. Share the bear book with the students. Give them time to tell what they know about bears. Guide the conversation to the idea that bears live in caves.
2. Show the students the 5 number card, and have them count the five dots with you. Tell them that you want to have the same number of teddy bear counters. Ask how many to count out. Have them count the bears with you.
3. Let the children know that we are going to play a game. Show them an opaque cup and tell them that we will pretend that this is a bear cave. Let them know that you are going to take some of the group of five bears and put them in the cave, and that you will leave some out of the cave. As you are doing this, they will need to close their eyes so they cannot see. When they open their eyes, you will ask them how many bears they think are hiding in the cave.
4. Play a round with the students. When they say how many bears are hiding, ask them to explain how they know. If the number 5 is too difficult for most of the students, play again with a lower number. Play two more rounds.

### Exploration

5. Pair the students and have them move to their workstations. Assign numbers so that each pair has a 1 and a 2. Tell them that Partner 1 will hide the bears the first round, and Partner 2 will tell how many are hiding. Then they will switch. Deliver a cup with five bears to each pair. (If 5 is too high, remove the appropriate number of bears from the cups as you pass them out.)
6. Observe the students as they play, taking note of their ability to determine the number of hiding bears. If students need a larger number, hand them a different number card. Tell them they need to get more bears to make that number, and then to continue playing.
7. Allow students to continue playing for about ten minutes. If they seem to be losing interest, check to see if the number they are working with is too high or too low.

### Summarize

8. Call the students back to the group area. Have them bring their cups and bears and give them to you.
9. Show the students a chart on which you've drawn some caves. Tell them you want to record what they found out about the number of hiding bears. At the top of the chart, draw the number of bears that most students were able to work with comfortably.



10. Ask the students to tell you one way that we could hide bears in the cave. Record their thinking. Repeat the process until they have exhausted the number of ways they can determine. (It will be interesting to see if anyone comes up with a combination including zero.)
11. Let the students know that this is a game that they will get to play again, and they might want to play the game when they have free time, trying out some different numbers.

### **Things to Observe**

#### **Linking Assessment to Instruction**

- Did the game make sense to the students?
- What were good target numbers for each student? Which numbers provided a challenge, without causing students to become frustrated?
- How did the students solve the problem?
  - » Did they “just know”?
  - » Did they count on?
  - » Did they put up the total number of fingers, and then separate out the number of bears that were visible, counting the remaining fingers?
  - » Did they use other number relationships?

Find more classroom lessons online at [mathsolutions.com](http://mathsolutions.com).  
Visit the “Educator Tools” section and click “Free Classroom Lessons.”



# Number Cards

From *Teaching Number Sense, Kindergarten* by Chris Confer. © 2005 Math Solutions Publications.

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1

1

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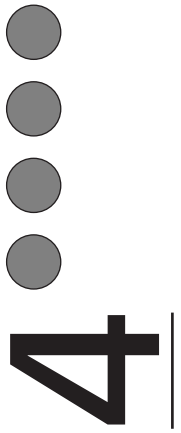
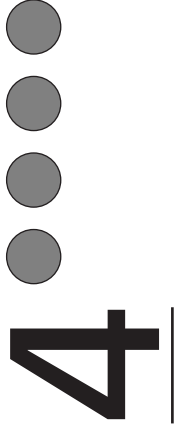
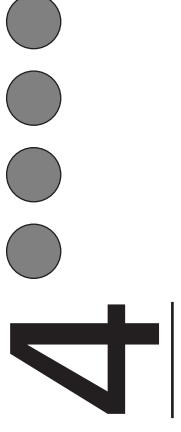
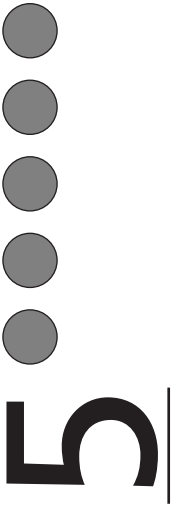
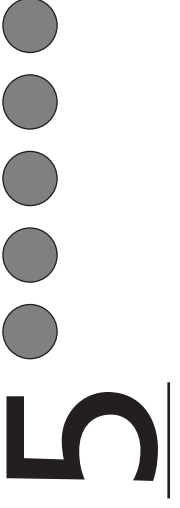
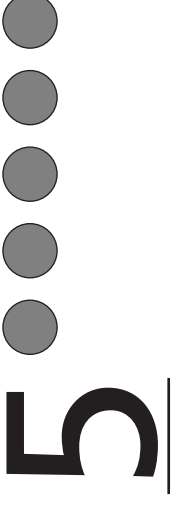
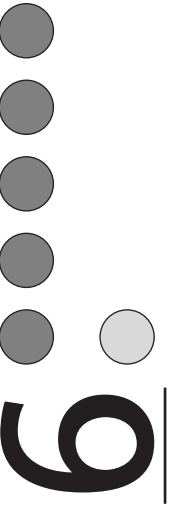
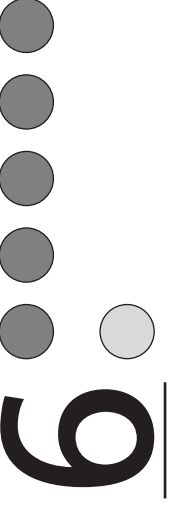
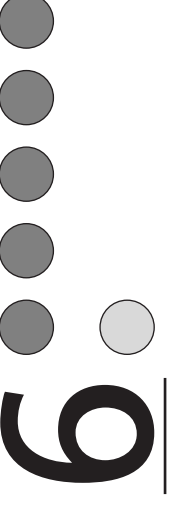
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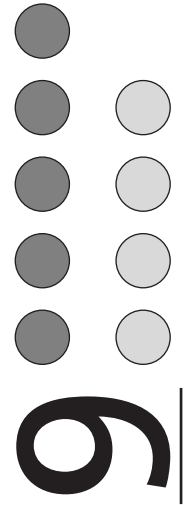
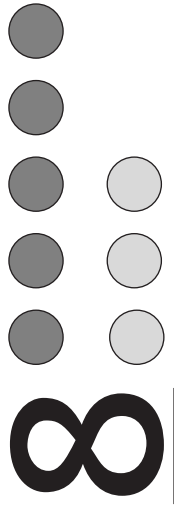
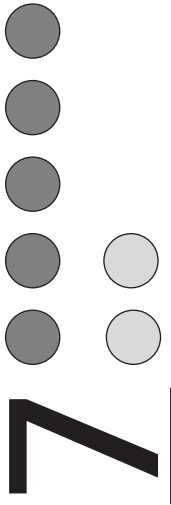
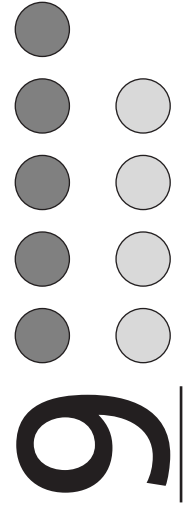
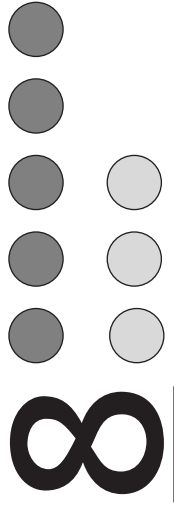
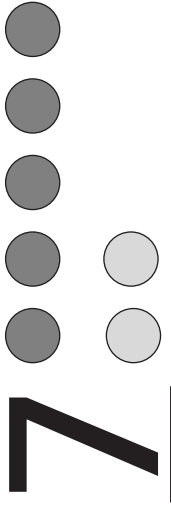
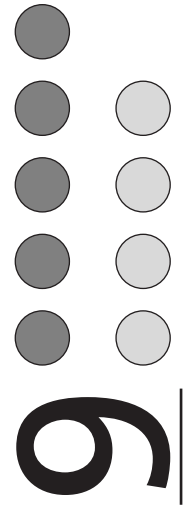
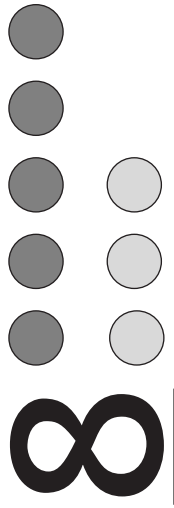
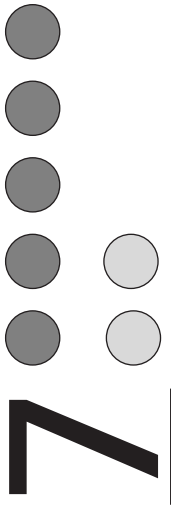
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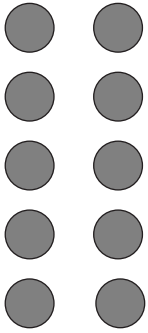
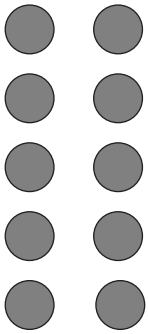
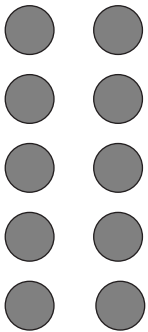
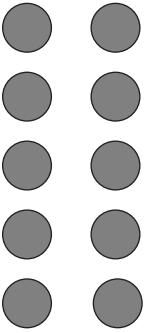
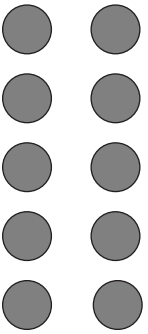
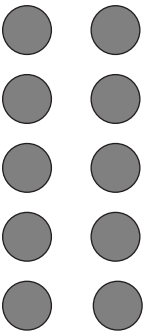
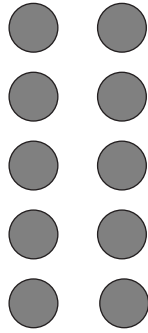
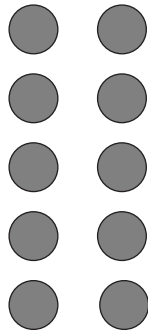
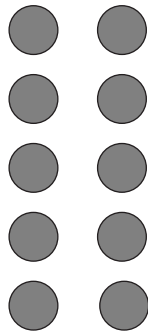
# Number Cards

 <p>4</p>	 <p>4</p>	 <p>4</p>
 <p>5</p>	 <p>5</p>	 <p>5</p>
 <p>6</p>	 <p>6</p>	 <p>6</p>

# Number Cards



# Number Cards

 <u>10</u>	 <u>10</u>	 <u>10</u>
 <u>11</u>	 <u>11</u>	 <u>11</u>
 <u>12</u>	 <u>12</u>	 <u>12</u>