

## Bears in Caves

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<b>Strand:</b>	Number and Number Sense
<b>Topic:</b>	Composing and Decomposing Numbers to 10
<b>Primary SOL:</b>	K.4 The student will a) recognize and describe with fluency part-whole relationships for numbers up to 5; and b) investigate and describe part-whole relationships for numbers up to 10.
<b>Related SOL:</b>	K.1, K.6

### Materials

- Bear counters
- Plastic bowls/cups (caves) – one for each set of partners

### Vocabulary

*number, part, whole, zero (0), one (1), two (2), three (3), four (4), five (5), six (6), seven (7), eight (8), nine (9), ten (10)*

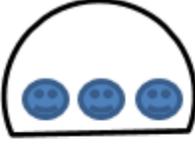
### Student/Teacher Actions: What should students be doing? What should teachers be doing?

*Note: This activity can be done with however many total counters you wish to focus on as the “whole” for the day. This lesson is written using three as the whole. When working on part/whole activities, students typically work with one ‘whole’ for several days until they are fluent with all of the combinations for that ‘whole’. If a math workshop model is being used, this activity in this lesson can become a station and each student can work on whatever ‘whole’ is appropriate for his or her level of learning.*

1. Tell students which number they will be working on during the activity and have them brainstorm things that they know about that number. For example, the number “3” could tell how many sides on a triangle or three fingers displayed on a hand or the age of a sibling.
2. Record their ideas on chart paper/board to begin the conversation about the number being discussed.
3. Model the Bears in Caves activity. Show students the bowl and explain that we are going to pretend it is a cave that bears might live in. Count out three bears and place them under the bowl. (Let students see you putting all three bears under the bowl.) Then ask, “How many bears are in the cave?” Lift the bowl and show students the three bears. Now reach under the bowl and pull one bear out from under the cave and sit him beside the bowl, while keeping the others covered. Then ask, “How many bears do you think are in the cave now?” Once students have shared their ideas lift the bowl to show that there are two bears in the cave. Say: “Two bears in the cave and one bear out of the cave and three bears in all!” If you have introduced the language of part-part-whole, reinforce it by pointing to the parts and the whole as you say “part-part-whole”. Put all three bears back in the cave and repeat pulling the same or a different number of bears

out. Repeat this activity several times before proceeding to the next part. Be sure to include opportunities to talk about 0 and 3 as being parts of 3.

4. Assign partners to work together for the partner activity. Each set of partners should get a plastic bowl/cup to represent the bear cave. Have the partners count the number of bears they will be working with during the lesson (in this case, 3) and let them know that this number indicates the ‘whole’ or how many bears they will have in all.
5. Explain that students will take turns with their partner hiding some of the bears in the cave (under the bowl/cup) and leaving the rest outside the cave. Their partner will guess how many are in the cave. Students will check to make sure they are correct by lifting the bowl or cup.
6. Students will continue taking turns hiding bears in the cave until they have found different parts for the whole. As students are working together, notice who is correctly predicting how many bears are in the cave and who may be wildly guessing. Students who are correctly predicting are becoming fluent, while those who are not need more practice.
7. Pull the students back together for a whole-class discussion of the different parts they found for the number, and the strategies they used to decide how many bears were hiding inside the cave. Students may talk about counting back or counting up as they discuss their strategies – especially when they begin working with bigger numbers. The goal is for kindergarten students to become fluent with all of the combinations for numbers through 5 and to not have to figure it out. This takes lots of practice.
8. List all the different parts for the number of the day on chart paper/board, and discuss what the students notice. You may wish to use a chart something like this:

	<p>3 and 0</p>
	<p>2 and 1</p>

### Assessment

- **Questions**

- If \_\_\_\_ bears are outside the cave, how many are inside the cave? How do you know?
- How did you determine how many bears were inside the cave?
- Do you notice any patterns with the different parts you found?

- What number always goes with \_\_\_\_ to make \_\_\_\_? Why can't it be a different number?
- **Journal/writing prompts**
  - If there are five bears and three are outside the cave, how many are inside the cave? Draw a picture to show the parts and the whole.
  - Carrie had 4 seashells. Some were inside the bucket and some were laying on the sand. Draw pictures to show all of the ways Carrie's shells might be placed.
- **Other Assessments**
  - Provide a container of counters. Have students count out 5 (or whatever number you are working on). Hide some of the counters under your hand. Ask students to tell you how many counters are hidden. Repeat for all of the combinations for that number.

### **Extensions and Connections (for all students)**

- Students can solve story problems where the whole is known but the two parts are unknown. "I have five crayons in all. Some are blue and some are purple. How many of each could there be?" Encourage students to find all of the ways.
- As students work toward fluency they can be encouraged to also write number sentences to represent the parts and the whole ("2 and 3 is 5," or "5 is 2 and 3").
- This activity can be placed at a station for students to complete during math workshop.

### **Strategies for Differentiation**

- Differentiate the "whole" with which each student will work.
- Have the students write the part in the cave and the part out of the cave. A recording sheet can be provided.
- Have students use a part-part-whole mat to record the parts using pictures or numerals.
- Provide a number path to assist with writing numerals.