

## WHERE'S THE BEAR? LOOKING BEFORE, AFTER, AND IN-BETWEEN

**Key Focus:** Mathematics

*\*Note to presenter: This guided practice involves viewing a teaching activity and then thinking about what you would assess in an activity like this and how you would collect the information most efficiently. The activity involves putting the numbers 1 to 10 on cups and lining them up in order. The teacher then hides a bear under one of the cups and provides hints to the children about where the bear is hidden. The children are supposed to guess where the bear is based on the hints provided. Tell the participants to watch the lesson and think about what they would assess in an activity like this and how they would document.*

**Observation:** Play Video “Where’s the Bear?”

Reflecting on the Documentation: *\*Participants may quickly shift from reflecting on the documentation to interpreting the observation or suggesting strategies for extending learning. Remind participants that we will discuss that later.*

**Ask:** What important concepts are being demonstrated in this video?  
*\*List ideas on chart paper or a whiteboard.*

### **Sample Responses:**

- Participants may focus on how Ms. Copley is stressing the concepts of before, after, and in-between, and the order of numbers. Help participants to understand that “before” and “after” questions are designed to help children with their knowledge and understanding of the order of numbers. Children can frequently say the numbers 1 to 10 and not be able to tell you the number that comes “after 3” without starting at 1 and counting forward. Similarly, unless they have counted backwards from 10 often enough to be familiar with the sequence, they will not be able to tell a number that comes “before” without the help of a visual number line of some kind.
- Participants may also focus on how Ms. Copley is concentrating on ordinal numbers, like first, eighth, etc.

**Say:** Think about how you would monitor and document children’s knowledge of the order of numbers. Children in this video segment had a lot of options that would be correct and so may have selected the number by chance—we don’t know if they really understood the concepts or made some lucky guesses. Ms. Copley gave some visual prompts (gesturing with her arms) and they had the visual cue of the numbered cups. This session taught the children how to play the game and helped them to understand the questions.

**Ask:** How would the activity differ if you were going to use it to gather assessment information?

### **Sample Responses:**

- In assessing this area, you would ask some questions with more limited options (“after 3 and before 7”) or maybe ask them the number right after 3 or the number right before 7.

- You would not prompt by pointing to the numbers before and after, so that you could see who can do it without that help (if they don't get it you could point before or after and make a note that they still needed a prompt.)
- You would ask them to tell the name of the number instead of just pointing.
- You might have one of the children hide the bear and ask him or her to give a clue to the other children. In that way you would know if the child could tell you the numbers that were before and after the number cup that he or she selected.

**Say:** We are going to look at one way to collect information about what children demonstrate in the activity. [*\*DISTRIBUTE HANDOUT and read the top section.\**]

**Ask:** What are some advantages of a record sheet like this?

*\*You may need to help participants to understand that it is not important where the bear really is. What matters is that the children show understanding of number sequence.\**

**Sample Responses:** It would be easy to record quickly what the question was and what the child said. You can keep track of who needed a turn. You can easily count how many times children needed prompts or incorrectly responded by counting. You can see patterns in how the children respond. For example, Alma always gives the first number “after.” You can see which numbers they named.

Interpretation of  
the  
Observation:

*\*Remind participants that in their interpretation they are looking for patterns, critical incidents, or errors. It is important to stick to the data. Participants may also suggest new questions (hypotheses) to be examined.\**

**Ask:** What do you learn about the four children listed on the recording sheet?

**Sample Responses:**

- Zavin and Alma were correct each time they responded. Alma always gives the first number “after.” Zavin was able to name the number even when there was only one possible correct answer. Both of them were able to name the numbers.
- Mike named numbers correctly when asked, but could not figure out how to provide clues—he confused the use of “before” and “after” when he was forming a question.
- Carla also needed some prompts and she named the number after the end of the sequence—perhaps she paid attention only to the last number she heard and named the number after it. It is not clear if she understands what the game is. Her final response was pointing and she pointed to a number that is in the middle so she may be beginning to understand the game.

Relating Your Observation to the Child Outcomes Framework:

*\*Although participants can defend other interpretations, there should be general consensus that this observation demonstrates:*

**3B3/4 (Mathematics/Number and Operations):** Develops increasing ability to count in sequence to 10 and beyond; begins to make use of one-to-one correspondence in counting objects and matching groups of objects.

**6C3 (Social and Emotional Development/Cooperation):** Develops increasing abilities to give and take in interactions; to take turns in games or using materials; and to interact without being overly submissive or directive.

Next steps for large group instruction:

*\*Help participants make connections between what they learn from the assessment and the next steps they want to take in instruction. If suggestions for instruction extend activities to new areas of learning, ask participants to consider what aspects of children's progress they would assess and how they would do so during those extension activities.*

**Ask:** What would you recommend that the teacher do next for the class as a whole?

*\*Responses will vary but might include:*

- Make "guessing numbers" a regular part of the daily classroom routine. For example, before transitioning to lunch time, tell children that you are thinking of a number between 1 and 10 and ask children to take guesses, giving them hints that the number is either "before" or "after." You could also transition them to the terms, "less than" and "greater than" as they become proficient.
- *Note: participants may want to extend the concepts of "before" and "after" to literacy. Point out that this is an extension to another domain and talk about how they would assess. An example of a response a participant might give is: Read a book (such as the *The Very Hungry Caterpillar*, Carle, Eric, 1994) and ask children to think about critical events in the book using the terms "before" and "after." (For example, after eating all the food he was a big, fat caterpillar. Before eating all the food he was small.)*

Next steps for individualized instruction:

**Ask:** Based on the documentation, what would you recommend that the teacher do next for individual children?

*\* Responses will vary but might include:*

- Perhaps work individually with Carla to help her to understand the game. Continue to use the numbered cups or a number line when playing this game with her.
- Give Mike and Alma an opportunity to guess a number that is "before" without giving an "after" clue and see if they can think about numbers that come before a given number.
- Zavin correctly named numbers even when there was only one number in between the numbers named, though he did not always name the number right after the "after" clue. You might try having

Zavin guess a number without the visual cues of the numbered cups. If he is successful with numbers from 1 to 10 without additional cues, you might increase the range of numbers (for example, guess a number from 1 to 20, while initially offering the visual cue of the numbered cups).

Some participants may want to return to a discussion of learning ordinal numbers (that they saw being prompted in the video).

- Begin working with children to understand and use ordinal numbers. None of the children in this segment used ordinal numbers in their speech. Play this game again but rather than asking children to only physically point to the cup they choose, ask them to tell you which cup it is. (For example, prompt children to say “I choose the ‘10th’ cup” or “I choose the ‘first’ cup.”) Model this language for them and make it part of the game.
- Assess whether children are able to transfer the knowledge of ordinal numbers to other domains. For example, put the letters of children’s names on unifix cubes and have them talk about the letters in their name. For a child with the name “Max”, you can talk about how the M is the first letter, the “a” is the second letter, and “x” is the third letter in his name.
- You might also play a game by lining children up and having them practice ordinal numbers using movement. Talk about which children are first, second, third, and so on. Ask a child to give something to the fourth child or ask who is after the third child in line.

Additional  
Notes:

This last activity is a great one to share with families. Suggest that it would be a fun game to play with their child the next time parents are waiting in line at the grocery store or at a doctor’s office.

You might also ask parents to practice counting forward and backward starting from a number other than 1 or 10.