

HALLIE AND HASSAN: HOW MANY ARE THERE?

Key Focus: Mathematics

Observation: *October 24:* Hallie and Hassan are using pattern blocks. Hallie places one red, one blue, one red, one blue, saying “Red,” “Blue” as she adds each block. Hassan has blue, green, blue, red, yellow, blue, and blue. Hassan counts “One, two, three, four,” Hallie says, “One, two, three, four.” Hassan says, “You don’t have four.” Then he points to each of her blocks and counts to four. Hallie points and says “One, two, three, five.”

October 26: At lunch I asked Hallie to count the number of children at her table so I could give her enough plates. She said each child’s name out loud. Amber said, “That’s four.”

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 to discuss the advantages and disadvantages of the documentation technique.*

Ask: How could the anecdote or jotting have been improved?

Sample Responses: Both pieces of information are stated objectively. A bit more detail in both situations could have enriched the observations. For instance, was Hassan counting just his blue blocks or all of his blocks the first time he counted to four? Did Hallie point to the blocks when she counted the first time? Was she looking at Hassan’s blocks or her own? What is Hallie’s affect or disposition related to her experience with numbers (for example, her level of enjoyment or frustration)? Was this a free-choice activity or were the children asked to create a pattern?

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.*

Ask: From these two observations, what do we know about Hallie’s math skills?

Sample Responses: She used an alternating color pattern (ABAB = red, blue, red, blue) and verbally described the pattern. Assuming Hallie does really have four pattern blocks, she may have initially maintained one-to-one correspondence but it is not clear if she was repeating what Hassan said or accurately counting to four. However, even if she did initially count with one-to-one correspondence, this competency has not been solidified, as she later skipped the number four when counting. At lunch, when asked how many children were at the table, she responded with children’s names, perhaps indicating that her first strategy for counting is to name the characteristics of objects (for example, “red” or “child name”) rather than the quantity, or indicating that she does not understand questions about quantity. Thus, it seems that Hallie has not fully begun to associate number concepts, vocabulary, and quantities in meaningful ways, but does seem to be showing some interest, at least in imitation of others.

Ask: How do Hallie’s math abilities compare to Hassan’s? To Amber’s?

Sample Responses: Hallie and Hassan both seem to need work on number concepts. Hassan seems to have rote counting to four and is beginning to use one-to-one correspondence, but thought Hallie did not have four blocks (though he then counted to four with one-to-one correspondence); Amber seems to have more advanced skills than Hallie

as she immediately responded “four” when asked the question “how many,” but it could be that “four” is the standard number of children at a table each day and she has just memorized the response. More evidence is needed.

Relating your observation to the Child Outcomes Framework:

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

3C2 (Mathematics/Patterns and Measurement): Shows increasing abilities to match, sort, put in a series, and regroup objects according to one or two attributes such as shape or size.

3A1 (Mathematics/Number and Operations): Demonstrates increasing interest and awareness of numbers and counting as a means for solving problems and determining quantity.

3A4 (Mathematics/Number and Operations): Begins to make use of one-to-one correspondence in counting objects and matching groups of objects.

3A6 (Mathematics/Number and Operations): Develops increased abilities to combine, separate, and name “how many” concrete objects.

1B2 (Language/Speaking and Communicating): Progresses in abilities to initiate and respond appropriately in conversation and discussions with peers and adults.

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:*

- During outside time, bring all children into a circle and have them play a game (similar to “duck, duck, goose”) where each child associates a tap on the head with a number by counting from one up to 10, where the “10” person runs around the circle. This facilitates understanding of one-to-one-correspondence.
- Read and act out a story like *The Doorbell Rang* (Hutchins, Pat, 1986) and count how many children there are.

Next steps for individualized instruction:

Ask: What activities would you provide for Hallie to support her math learning?

**Responses will vary but might include:*

- Practice rote counting to 10 at different times of the day. Sit with Hallie at the math center and use counting bears to make patterns, then ask her to continue to count the patterns she makes. She could match each bear to a number on the number line and say the numbers while counting the bears. Alternate different materials such as beads or linking cubes. Have Hallie count out napkins or cups at snack time. Have Hallie show you “how many” with her fingers as well as by verbally counting.

Ask: What activities would you provide for Hassan to support his math development?

**Responses will vary but might include:*

- Similar responses as for Hallie. Find meaningful ways to count. Perhaps count steps or jump a specific number of times. Help him translate his rote counting (saying the numbers in the correct order) skills into actual one-to-one counting and being able to answer “how many” (that is, knowing that the last number counted is the number of things that you have).

Additional Notes: Consider other ways to collect information about counting more systematically. What kind of checklist might be helpful?