Infant

Answer Key for Observing M5 in Action

This handout provides sample responses that help facilitators discuss each of the M5 teaching practices observed in the video clip. It includes questions that apply across ages. Use the questions that work best for the video you have chosen. The video clip may or may not include examples related to each question.

Video:
Exploring Space with Their Bodies (8–18 months)

In this video, infants explore a variety of open-ended materials. The educator learns about individual children's interests and supports their growing understanding of numbers and spatial relationships.

Mutual Learning

- What did (or might) the educator learn about each child during this experience?
- In what ways was the educator responsive to individual children? Consider the children's interests, languages, cultures and lived experiences, abilities, and emerging skills and knowledge.

Some Possible Responses

The educator observed children to learn about their interests and abilities. She was responsive to the different ways children interacted with objects. For example, she noticed a child's interest in putting the lid on the ice cream container. The child then tried to put the lid on a different container, and the educator asked, "How does that fit?" When the educator observed children adding balls to the white tub, she said, "More in. Let's see if we can pick them all up." In addition, she noticed a child tapping balls and responded by modeling math language, "Tap, tap, tap, two balls."

Meaningful Investigations

- In what ways was the experience based on children's questions, interests, or real-world situations?
- In what ways was the experience open-ended? How did the open-ended nature support children to experiment with different approaches to solving a problem or answering a question?
- In what ways did the educator support children's thinking and problem-solving?

Some Possible Responses

The experience was based on the children's interest in balls and containers. The experience was open-ended. Children were able to use the materials in different ways and could experiment by putting different objects inside containers. The children were able to use spatial thinking while freely exploring the materials—thinking about how different objects fit inside containers.

The educator encouraged children to continue exploring by describing what the children were doing as they explored. She said, "They put the little tubs inside the big tubs."

She also used questions to encourage children to think and explore:

- "Is there room for two boys in a tub?"
- "What are you collecting, Yolo? Would you like a ball for your basket, Yolo?"
- "Do you want more?"

Materials and Learning Environment

- What did you notice about the materials and learning environment?
- In what ways did the materials and learning environment promote children's understanding of relevant math concepts?

Some Possible Responses

The materials were open-ended; children could use them in more than one way. For example, children explored containers such as tubs, jars, bowls, cylinders, and baskets that they could move around, fit together, or fill up with smaller objects. The materials allowed infants to explore size (big tub, little tub), quantity (one ball, two balls, more balls), position in space (inside the tub, on top), and volume (filling up the cylinder, empty, full).

Math Vocabulary and Discourse

- What math vocabulary did the children or educator use?
- In what ways did the educator encourage children to notice and communicate about math concepts (for example, by asking open-ended questions)?
- In what ways did the educator encourage children to participate in math discussions? Some ways children might participate in math discussions include questioning, describing, comparing, or explaining.
- In what ways did the educator support multilingual learners to communicate about math concepts?

Some Possible Responses

The educator used math vocabulary to support children's understanding of math concepts. To help children understand quantity, the educator signed "more" while verbally asking the child, "Do you want more?" The educator also used math vocabulary to describe size (big tub, little tub) and spatial language (in, on top). She also modeled using number words when she said, "tap, tap, tap, two balls."

Multiple Representations

- What opportunities did the educator offer children to explore and learn about math concepts in different ways?
- What other learning experiences or materials might the educator offer to continue building children's understanding of relevant math concepts?

Some Possible Responses

Children explored the concept of "inside" in different ways. They placed different objects and their bodies inside different containers. The educator might extend children's understanding using other materials and in different contexts. For example, the educator might use vocabulary such as "inside" while pouring water into a cup or while putting a child's feet "inside" pant legs during a diaper change.