Guide for Observing and Individualizing

Science

3–5 Years

Science: Inquiry Skills
WHEN INTRODUCED AND EMPHASIZED: Weeks 3–4 and 8–10
BEHAVIORS TO OBSERVE • Using Inquiry Skills

OBSERVATION OPPORTUNITIES

In what ways does the child use inquiry skills as he/she:

- plays outside or inside (any free play period after Week 3, Day 1)? Example: Child observes his/her shadow on the ground. He/she describes the shadow as a dark spot. In response to a staff member's question, the child describes how the shadow changes when he/she moves.
- transitions to mealtime; makes predictions about what will happen when he/she rubs soap on his/her wet hands; describes changes he/she sees while washing hands; (any transition involving handwashing after Week 3, Day 1)? Example: Child says "The mud ran down the sink when I washed my hands."
- uses one or more his/her five senses to describe an item(s) (Week 8, Day 2 group activity)? Example: Staff asks "What does it taste like?" Child says "It tastes sweet!"
- uses a magnifying glass to explore items (Week 10, Day 3 center activity)?

FOLLOW-UP LEARNING SUPPORTS

Reinforce

The following activities are designed to support the ongoing development of emerging inquiry skills.

- Encourage children to use inquiry skills while exploring center activities. Examples: Invite children to describe how wet chalk writes differently from dry chalk. Invite children to experiment with a balance scale. Encourage children to predict what will happen if more weight is added to one side of a scale. Invite children to compare differences in working with wet and dry sand (example: it's easier to keep wet sand in an area versus dry sand).
- Encourage children to use their inquiry skills with their senses while interacting with various items in the centers in Week 9. Examples: Invite a child to compare how things look when looking through a craft roll with colored cellophane versus not looking through a craft roll with colored cellophane, in the Week 9, Day 1 center activity. Encourage a child to predict how a marker will smell in Week 9, Day 2 center activity.

- Encourage children to record their observations of what is or is not attracted to a magnet in the Week 4, Day 2 group activity.
- Invite children to design their own science experiment. Provide materials and support as needed. Encourage children to use the concepts of predict, compare, and observe as they design their experiment.

Reintroduce

The following activities are designed to support the development of inquiry skills among children who find it challenging to use inquiry skills. These activities are also appropriate for all children.

- Repeat the Week 3, Day 1 group activity. Clearly explain and define each inquiry skill introduced in the activity.
- Repeat Week 8, Day 3 group activity. Remind children to use their senses to identify things around them.
- Repeat the Week 10, Day 1 group activity. Use the balance scale for children to compare the relative weight of different items. Emphasize the concepts of predict and compare.

EXAMPLES OF PORTFOLIO ENTRIES

Children in our room are learning how to use inquiry skills to learn more about the world. Recently I observed Jermaine's inquiry skills in a variety of settings on different days. He seems to especially enjoy working with tools for measuring and observing, including binoculars and a magnifying glass. Jermaine also demonstrated an understanding of an experiment when children in the room exposed ice to heat. He appropriately responded to a question about an inquiry skill during a staff-initiated activity. We will continue to support Jermaine's understanding and use of inquiry skills.

Children in our room are learning how to use inquiry skills to learn more about the world. Recently I observed Tongdan's use of inquiry skills in a variety of settings on different days. She described and compared different items during a play period. She communicated her comparisons without using comparison words, such as different, same, and similar. Tongdan also actively participated in group activities focused on manipulating ice and magnets. During an outdoor time, she showed strong interest in using binoculars. We will continue to provide experiences that help Tongdan develop her understanding and use of inquiry skills.

Children in our room are learning how to use inquiry skills to learn more about the world. Recently I observed Francesco's inquiry skills in a variety of settings on different days. During a session focused on shadows, he enjoyed dancing outside but did not wish to watch how his shadow moved when he moved. He is aware of body parts associated with each of the five senses (such as using our eyes to see) but seems less interested comparing things, such as what happens to ice when exposed to heat. Francesco shows strong interest in using tools for observing things, especially a magnifying glass. We will continue to provide learning opportunities to help Francesco develop his understanding and use of inquiry skills.