



Inquiry across Ages and Contexts

The purpose of this activity is for educators to notice different ways children engage in inquiry.

Key Concepts

- Children engage in inquiry in different ways across a variety of settings.

Materials and Setup

- Photo cards (pages 3–5)

 15 minutes

 Small groups

 In-person or virtual professional learning

Activity Instructions

1. Form a small group (3–4 people).
2. Review the photo cards. Each card shares a vignette of a child engaging in inquiry.
3. Each person in the group will choose one of the cards.
4. Individually, review the scenario and consider how the child is engaging in inquiry, specifically:
 - a. In what ways is the child demonstrating curiosity?
 - b. In what ways is the child investigating or experimenting?
 - c. What types of understandings might the child be building about STEAM concepts and phenomena?
5. After each individual has reviewed their card they will provide an overview of their card to the other group members.
6. As a group, compare and contrast how the children in the different scenarios are engaging in inquiry.



Reflect and Discuss

Discuss the following questions with your group. Use the vignettes and photo cards for examples that might support your discussion.

- All children express curiosity or wonder. How might younger children and older children express curiosity in similar or different ways?
- All children interact with the environment to test their ideas and notice what happens. How might younger children and older children investigate in similar or different ways?
- All children demonstrate their understanding in many ways (for example, through gestures, their home language, drawings). How might younger children and older children demonstrate and communicate their understanding in similar or different ways?
- The vignettes featured different settings. How did the context of the vignette create space for this type of inquiry?

Photo Cards

Print pages 3–5 on cardstock. Cut out each vignette and photo to create individual cards.



Floor Time—Younger Infant

Mika crawls over to the toy tiger. He pushes it with his hand and watches it move. He smiles and pushes it again. The educator asks, “Are you making the tiger roll again?” Gesturing with her hand she says, “The wheels are spinning around while it rolls.” Mika again pushes the tiger and observes the wheels roll. He picks up the tiger with one hand and spins the wheels with the other. The educator offers Mika a toy car. Similarly, Mika holds the car with one hand, spinning the wheels with the other. The educator asks, “I wonder if the car will roll like the tiger?” Mika puts the car on the floor and pushes it, watching it roll away.



Music Center—Older Infant

Carlos is exploring in the music center outside. He picks up a wooden mallet and begins to tap on the xylophone. As the sound changes, he smiles. He bangs harder, creating louder sounds and smiling even bigger. Next, he uses the mallet on the drum nearby. A very different sound is created. He smiles and hits the drum again. Carlos then moves around the music area, tapping his mallet on the different instruments, noticing the different sounds that are created.



Sink—Younger Toddler

While Jenna is washing her hands, she plays with the soap and water. She watches the soap rinse off her hands. She gets more soap, and this time, when she rubs the soap in her hands—bubbles form! She smiles and does it again. She adds more soap but doesn’t rub her hands—no bubbles form. She repeats this a few times, smiling when she is able to make bubbles. Her educator approaches to redirect Jenna to the table. Jenna holds up her hands and says “Bubbles!” with a smile. The educator asks, “How did you make the bubbles?” Jenna looks at her educators and rubs her hands together quickly. The educator responds, “Oh, rubbing your hands causes the bubbles to form.”



Painting—Older Toddler

Jamal is finger-painting. First, he uses blue paint, pressing his hands on the paper to make a blue smudge. Then, he uses yellow paint and uses his fingers to create yellow dots all over his paper, even on top of the blue smudge. He looks at his painting, noticing that his blue paint has changed to green. He looks toward his classmate excitedly, pointing to his paper, saying, "Green!" Jamal resumes painting, intentionally mixing different colors, labeling new colors created such as "Purple!" after mixing red and blue and "Pink!" after mixing white and red.



Mealtime—Preschool

Ms. Sophia accidentally spills milk when pouring drinks for the children at mealtime. "Uh-oh! You spilled!" says Keith. Ms. Sophia places a paper towel on top of the spilled milk and continues filling the other cups. "It disappeared!" says Keith, pointing at the table where the milk had spilled. "Oh, you noticed that the milk disappeared. Where do you think it went?" The children and educator discuss different ideas. She explains that the paper towel is absorbing the milk. The children are interested in this idea. After mealtime, Ms. Sophia offers trays of water for the children along with different materials (for example, paper towel, toilet paper, plastic fork, plastic toys). The children test what happens when they put the different materials in the water. They notice that some absorb the water, and others do not. Their educator talks about ways some materials absorb liquids and others do not.



Block Area—Transitional Kindergarten

Michael is building a house for a dinosaur. When he places the dinosaur inside, one of the walls falls over. He looks at his structure and notices that he has a problem—the dinosaur is too big. He decides to redesign his structure using different sizes and combinations of blocks. He tests out his new design by placing the dinosaur inside and noticing whether it fits or not.



Science Center—First Grade

The butterflies are beginning to emerge from their cocoons in Ms. Swanson's first grade class. The children are excited and eager to make sure the butterflies are happy and cared for. "Will they eat leaves like the caterpillars did?" asks Jason. The other children contribute ideas as to what the butterfly might like to eat (for example, flowers, fruit, water, leaves, oats). Ms. Swanson says, "You all have some good ideas about what butterflies might need. How might we find out?" Together, the educator and children decide to place different foods and liquids in the butterfly enclosure. Over the next few days, they notice what foods they see the butterflies land on. They even notice that they use a long tube (the proboscis) to drink, not chew. They draw a picture in their journals each day to document what they notice. After a few days, they decide that the butterflies prefer sweet liquids.



Outside—Second Grade

Karla has been assigned to care for the class garden with two other classmates. Each day, she waters the garden, just like she does at home. She notices that one of the plants is turning yellow and doesn't understand why if she is watering all of the plants the same. Karla talks about this with her educator. Together, they use the computer to learn more about the different plants in the garden and what they need. They learn that the yellow plant, a succulent, needs very little water. Over the next week, Karla tests this idea and is sure not to water the succulent while watering the other plants. Over time, it changes back to a bright green.



Recess—Third Grade

During recess, children are playing on the teeter totter. Three children are sitting on one end, and two children are sitting on the other. They are laughing and giggling as they push the see saw up on one end, causing the other end to move down. They wonder about how much weight is needed on both sides to balance the beam. The children experiment by arranging different children on different parts of the teeter totter. They notice that balancing the beam involves both the weight and the position of the children on the beam. They share their discoveries with their educator. Back in the classroom, their educator challenges the children to build and test model teeter totters using classroom materials. The educator provides measuring tools and a digital scale, guiding students to document the weight and placement of objects as they investigate balance.