

CORE SKILL: THINK

Inquiry



What You Need to Know

Children are naturally curious, active learners who love to explore and test out their environment.

As you may remember from a previous Core Skill focus, there are many things you can do to promote their Active Exploration. This week, we will focus on supporting Inquiry Skills — going beyond wondering and free exploration to asking questions and using a hands-on approach to answer questions and explore the world around them. Children use their inquiry skills when they observe, experiment, gather information, and analyze something in order to better understand it.

Things to Consider

The scientific method is the process of observing, hypothesizing/predicting, experimenting, and recording and sharing conclusions that are used by researchers, scientists, doctors, and many others. Children can engage in these tried-and-true steps as well with your support! By doing so, they become primed to investigate as a way of learning.

Development of Inquiry Skills

Between 36 and 48 months, children may:	Between 48 and 60 months, children may:
Ask simple questions. Use adults as primary resources to gather information about questions.	Ask more complex questions. Use other sources besides adults to gather information (i.e., books).
Engage in simple investigations and experiments with adult support (e.g., how many dolls can the bridge hold before it collapses).	Engage in some parts of conducting complex investigations or experiments with increasing independence.

Setting the Stage

Activities and materials that support the development of inquiry skills:

- ◆ Explore nature and/or living things: inside (e.g., class pets and water table) and outside the classroom (e.g., nature hunts, animal, or weather observations).
- ◆ Science experiments: set up planned experiments or investigations.
- ◆ Collect data: record observations in a science journal or organize information into a graph.
- ◆ Communicate findings: set up opportunities for children to share what they discovered to deepen their own understanding (e.g., drawings or presentations for families, administrators, other classes, or small groups within your own).
- ◆ Explore with ramps, lights, magnifying glasses, water, and other tools.
- ◆ For additional support, provide visuals to prompt children to consider and question specific features, attributes, or elements. For example, while observing changes in a plant, provide visuals for “size” to prompt children to consider changes in the plant’s size, “color” to prompt exploration of colors, etc.
- ◆ WH-Questions (e.g., *what, who, where, when, why, how*) can be especially difficult for some children to use and understand. When offering guiding questions during moments of exploration, demonstrate and model the answers for children to support their gathering of information when appropriate. For example, a child is observing a line of ants marching on the playground. You can say, “*Where* do you think they are going? What *place* will they go to – the ant hill or the grass? Hmm, I wonder *where*... Oh, they went to the ant hill! We weren’t sure *where* they would go, and they marched to the ant hill.”



Intentional Teaching Practices to Support Inquiry Skills

OBSERVE	OBSERVE Take time to notice what sparks children’s interests and whether they follow up on those interests. Do children lean in close and try to figure out what’s making the light turn on? Which children tend to try to explain why they think things happen or how to solve a problem? Do some children seem interested but give up and move on before becoming fully engaged (i.e., who would benefit from extra support)?
FOCUS	Narrate and Encourage In-The-Moment Observations Observing means truly seeing what is happening in front of you. <ul style="list-style-type: none">◆ Model specific observations (say exactly what you see/observe in the moment): “I see the worm is folding up and then stretching out.”◆ Encourage child observations: “What do you see?” and, “What does it feel/smell/sound like (while pointing to hand, nose, and ear visual cues)?”
SCAFFOLD I	Promote Predictions Prompt children to make thoughtful predictions. <ul style="list-style-type: none">◆ “Do you think it will roll down the ramp? Give me a thumbs up or a nod if you think ‘yes!’ Let’s find out!”◆ “I wonder what will happen if we drip this red on the blue. What do you think?” The goal is to have children use what they already know or their past experiences to make an educated assumption/prediction about what may happen next or how something may react. Ground children in knowledge to help them avoid wild guesses. For additional support, provide visual cues of possible answers so children can point to indicate their response. <ul style="list-style-type: none">◆ “What do you know about...?”◆ “Why do you think that?”◆ “Remember when... Does that help us figure out what will happen here?”
SCAFFOLD II	Prompt Children to Compare, Contrast, and Categorize Prompt children to: <ul style="list-style-type: none">◆ Compare: “Do these two cups look the same? What happens in this cup when we put in the baking soda? Did that happen in the other cup without the baking soda?”◆ Contrast: “How is this leaf different from this one?”◆ Categorize: “Let’s sort them into living and non-living. Is this rock living?”◆ Recognize patterns and relationships: “What do you notice is the same or different about morning vs. night?” and, “Why do you think the squirrels like that tree?” For additional support, provide visuals to help children understand concepts like <i>same</i> and <i>different</i> , such as two triangles to indicate <i>same</i> and a triangle and a square to indicate <i>different</i> . You can also offer visuals of different attributes for children to refer to or sort.
KEEP IT GOING	Consider what you learned from observing children as well as their reaction to your Focus and Scaffolds. Find ways to build the activities in the Setting the Stage into your regular routines.