Reasoning

What You Need to Know

Reasoning is the process of thinking through something to come to a conclusion. Toddlers use their reasoning skills when they solve problems (e.g., pull a stool over to reach something high), figure out how things work (e.g., turn it multiple times until it fits, or fill and dump the same bucket over and over), make inferences based on past experiences (e.g., see an umbrella and say "rain"), or ask "Why?" repeatedly. You can help children practice and develop their newly forming reasoning skills by giving them the space and opportunity to notice or experiment with the world around them, and prompting them to consider *why* things happen, *how* things work, and *what* will happen next.

Things to Consider

Because toddlers are still developing their reasoning skills, they are often irrational. It can be perplexing for adults that a child's reasoning can vary greatly from one moment to the next. For example, an older toddler may give you a thoughtful explanation for how the water got into the bucket or figure out how to move a tube to make the water flow a different way, and in the following moment collapse to the floor because a peer has "their" red funnel (even though there are five identical funnels right in front of them). Sometimes it's best not to try and reason with toddlers because they just aren't ready or able to understand your logic – especially when they are tired, hungry, or really passionate about what they want! Instead, acknowledge their emotions and work together to find a solution to their problem.

Development of Reasoning Skills

Between 9 and 18 months, children may:	Between 16 and 36 months, children may:
Explore how to make something happen again or how something works by doing it over and over again (e.g., filling a container and emptying it out).	Seek information from others or experiment with different behaviors to see how people and objects react.
Engage in purposeful actions to cause things to happen (e.g., puddles, ball).	Experiment with everyday objects to answer "what," "why," and, "how."
	Identify the cause of an observed outcome (e.g., why tower fell).
	Predict outcomes of actions (e.g., water will come out if the spout is turned on) or what's next in a routine.
	Anticipates some cause and effects of their own actions, such as what happens while running with a cup of water.

Setting the Stage

Activities and materials that support the development of inquiry skills:

- Books, pretend play, or puppets: prompt children to consider *how* characters are thinking or acting and *why*. Or use photos taken of children in the classroom to help children connect their reasoning to a concrete event.
- Nature and/or science activities: exploring, making observations, and considering how and why things work.
- Materials or games that allow children to manipulate cause-and-effect and require reasoning (e.g., levers that open, lights that blink, or jumping in puddles and splashing in water).
- Matching or sorting games or routines: match by attribute and function (e.g., clean up by putting baby dolls with other baby dolls in the Dramatic Play center and balls with balls, or sorting bears by color).
- For children who may need additional support with reasoning, introduce cause-and-effect toys to support their ability to build early inductive reasoning skills.

Intentional Teaching Practices to Support Reasoning Skills

OBSERVE	**OBSERVE** Take time to observe children's reasoning. Do they explore how to make things happen or how things work by doing it over and over again? When do they engage in purposeful acts to make something happen? Can they identify the cause of something happening or predict what will happen? Who could use some extra support to encourage them to seek information and explore why, what, and how the world works?
FOCUS	**Narrate Reasoning** Draw attention to *what* you're doing and *why*, as well as the logic behind your actions. ♦ "I'm feeling so cold, brrr! I wonder what I can do… Oh! I'm going to put on a sweater to help me warm up!" ♦ "I can't fit this puzzle piece in this spot… Hmmm, I wonder what will happen if I turn it this way. It worked!" ♦ "I heard the doorbell! That must mean a visitor is here to see us. Let's go see who it is." ♦ "I'm going to move these blocks to the hard floor so they are steady. The carpet was too soft which made them fall over."
SCAFFOLD I	**Ask Open-Ended Questions** Ask open-ended questions (questions that can't be answered with only one or two words) that promote the use of reasoning. Have children consider: ♦ **Why and how something works**: "What happened when you pushed the play-dough through?" "Where did the water go?" or, "Uh-oh, why do you think our tower fell?" ♦ **What will happen in the future (if…then)**: "What will happen if we push this?" or, "What do you think will happen to this water if we pour it in the flowerpot?" For nonverbal children or those with limited language, provide access to visuals to support their communication or offer choices of two reasons for children to consider.
SCAFFOLD II	**Prompt Children's Explanations** Prompt children to explain their thinking and/or justify their answers. This will draw their attention to and give them practice explaining their reasoning. It will also provide you with insight that will help you provide targeted support (e.g., if you understand errors in their thought process, you know how to address them). ♦ "How do you know that?" ♦ "Why do you think that?" ♦ "Why did you put that one there?" For non-verbal toddlers, narrate what you think may be their intention or thought-process and observe to see if they confirm. ♦ "I think you are pushing on that because you think it will open the door. Is that right; do you want to get inside this cupboard?"
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 from Setting the Stage into your regular routines.