Good Guidance

THE 7 ESSENTIAL LIFE SKILLS

Skill 5: Critical Thinking

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In her book *Mind in the Making,* author Ellen Galinsky outlines seven essential life skills that all draw on and promote executive functions of the brain—the network of abilities that allow us to manage our thoughts, emotions, and behavior as we pursue goals. In this issue, Ellen and Nicole discuss the fifth life skill, critical thinking, and offer teachers practical suggestions for promoting this skill in their work with preschoolers.

The life skill of critical thinking

Critical thinking is the ongoing search for valid and reliable knowledge to guide beliefs, decisions, and actions. It involves analyzing, reflecting, problem solving, and evaluating. Any time we engage in a decision-making or problem-solving process, we draw on our critical thinking skills.

Think about a tough decision you made recently. What steps did you go through to figure out what to do? You probably used reasoning that’s similar to the scientific method—developing, testing, and refining your theory of “What causes X to happen?” The Ingredients of Critical Thinking are

1. Identify the dilemma, problem, or issue
2. Determine the goal

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3. Come up with alternative solutions
4. Consider how these alternative solutions might work
5. Select a solution to try
6. Evaluate the outcome and, if the solution isn’t working, try something else

Think again about that tough decision you had to make. Did you use any of the Ingredients of Critical Thinking? Which did you use? How might you use this approach in the future?

Critical thinking draws on all of the life skills and is one of the higher-order skills among the executive functions of the brain. It depends on brain processes like working memory, cognitive flexibility, and reflection.

**Working memory**

Using what you already know to arrive at a new conclusion requires holding information in your mind while working with the new information at the same time.

**Children draw on their working memory for critical thinking when they**

- Use what they know about building with blocks to make a structure that won’t fall down
- Draw on their knowledge to answer questions like “Where?,” “When?,” and “Who?”
- Create and act out a pretend-play scenario where they have to recall a favorite story or character

**Cognitive flexibility**

Thinking flexibly is essential for coming up with new solutions to a conflict, problem, or dilemma, rather than sticking with what is familiar or repeating what has already been tried.

**Children rely on their cognitive flexibility for critical thinking when they**

- Brainstorm different solutions to a conflict with a classmate
- Experiment with objects to see which float in water and which sink
- Listen to and understand other people’s answers and opinions—especially those that are different from their own

**Reflection**

The ability to take a step back and think about a situation before reacting often leads to a clearer perspective, helping guide thoughts and actions.

**Children engage in reflection for critical thinking when they**

- Consider why something didn’t work out the way they expected it to
- Take time to think before answering
- Evaluate whether a solution to a problem is working

How can we promote the life skill of critical thinking in young children?

By promoting critical thinking, you help children build and strengthen executive functions of the brain—the abilities we use whenever we engage in goal-directed behavior, like solving a problem. Although critical thinking develops over time as children grow, its use must be encouraged. Here are some suggestions for supporting the emerging skill of critical thinking in children:

**Encourage children’s curiosity.** When children ask why or try to figure out how something works, don’t jump in too quickly to answer their questions. Instead, support them in
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pursuing their own answers. For example, if a child wonders why ice melts indoors, set up an experiment by leaving ice cubes in both a warm and a cold place, and watch what happens. Guide children to use books or search the Internet with you to gather more information about their questions. You can also reply to children’s questions with, “I wonder. What do you think?”

**Model scientific thinking.** Children look to the important adults in their lives for clues about how to behave and how to learn information about the world. You can promote critical thinking in children by practicing it yourself. Ask open-ended questions that go beyond yes or no answers. Tell children when you learn something new, along with how you learned it. If you don’t know how to answer some of their questions, be honest and ask children how you can find the answer together.

**Give children opportunities to create and carry out their own experiments.** Think about some of the questions children have asked you recently. How might you help children turn those questions into experiments? For example, if children are interested in their shadows, offer them different objects and materials they can use to experiment with light and shadow. Encourage them to share what they learn with friends and family.

**Guide children through the Ingredients of Critical Thinking when problem solving.** When dealing with conflicts and challenges in the classroom, involve children in the problem-solving process. Help them identify the problem: “You want to play with that truck, but your friend is using it.” Then determine the goal: “You both want to play with the truck.” Next, encourage them to come up with possible solutions and ask them what would work and what wouldn’t work about each of their ideas. Finally, arrive at a solution to try: “We could use a timer, or you could play together.” If these solutions don’t work, come together to find another solution. **TYC**

**Conclusion**

As they play, children use the same processes as scientists. Watch children as young as toddlers play and you will see that they are testing out theories about the world. Toddlers and preschoolers have an impressive early understanding of cause and effect—precursors of critical thinking skills. When you notice children testing out balance by stacking blocks or exploring the various sounds they can make by dropping different objects, consider how you can help them build on these explorations to foster critical thinking.

This is the sixth article in an eight-part series appearing in TYC’s Good Guidance column. *Mind in the Making: The Seven Essential Life Skills Every Child Needs* is available from NAEYC.

In the next article in this series, we will look at the sixth life skill—Taking on Challenges.

**SUPPORTING DUAL LANGUAGE LEARNERS IN CRITICAL THINKING**

Bilingual children often have advantages that support critical thinking. Research shows that growing up with two languages enhances cognitive flexibility and the ability to use working memory as children go back and forth between their two languages. Asking “wh” questions is an important component of critical thinking activities, but they can be hard to communicate to children who speak different languages. The best approach is to learn a few key “wh” questions in each child’s home language to get their critical thinking started. Try “Why did that happen?” and “What will happen next?” These questions can be used in many different interactions.