

Scaffolding Executive Function Skills One Step at a Time

Three-year-old Rosa empties the bowl of counting bears while sitting at the table with her teacher. She counts the five bears in front of her, saying, “1, 2, 3, 4, 5, 6, 7, 8!” One way for her teacher to respond is to provide the correct answer. Another way is to provide scaffolding

What Is Scaffolding?

Scaffolding differs from other kinds of support because it involves figuring out how to change a task so the level of difficulty is just right for the child. The key is changing the task just enough so it is not too difficult and not too easy. If the task is too difficult, the child might become frustrated. If it is too easy, the child might not learn the new skill or stay engaged. With support from scaffolding, the child might be able to complete a task that is challenging—too challenging to complete without the scaffolding, but now one at which the child can succeed independently.



Why Use Scaffolding With Math Activities?

- When a math task is scaffolded so the level of difficulty is appropriate for a specific child, the child is more likely to enjoy and learn from the task than when they do a task that is too easy or too difficult without the scaffold.
- Teachers can provide scaffolds for many types of skills, including math and executive function (EF). By adjusting the demands for math, EF, or both types of skills during a math activity, teachers give children more opportunities to practice skills that are appropriately challenging.
- All children benefit from scaffolding. When teachers incorporate scaffolds into their instruction, more students can learn from and succeed at the activity.

What Does Scaffolding Look Like?

In the earlier vignette, Rosa counted aloud up to eight when counting five bears. Although this type of overcounting is common among young preschoolers, if Rosa keeps overcounting for several weeks or longer, her teacher could use scaffolding in this way:

First, suggest a specific strategy:

Rosa: “1, 2, 3, 4, 5, 6, 7, 8”

Teacher: “You counted aloud all the way up to eight! Let’s count again, this time putting each bear into this bowl as you count.”

Next, assess if the strategy was sufficient; if not, try another:

Rosa: “Okay. 1, 2, 3, 4.” (Rosa moves two bears when saying the number four).

Then, suggest a new strategy:

Teacher: “These two bears went into the bowl together. Let’s use these tongs to count each bear one at a time while we take them out of the bowl and line them up in a row.”

Model carefully to inhibit the child from doing the activity too quickly and incorrectly:

Rosa (and her Teacher): “1, 2 … (Together, the teacher and Rosa count the first two bears while Rosa uses the tongs to move the bears one at a time. Then Rosa continues counting independently…), 3, 4, 5.”

Teacher: “You were very careful to count each bear only once. Now we know that there are exactly five bears! That’s how many bears we have!”

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What Does Scaffolding NOT Look Like?

As you read the next example, think about why it is not an example of scaffolding.

Teacher: “How many bears are there?”

Rosa: “1, 2, 3, 4, 5, 6, 7, 8.”

Teacher: “Good try, but that’s not right. The answer is five. See, 1, 2, 3, 4, 5.”

In this interaction, the teacher immediately corrected Rosa and gave her the answer. Rosa did not learn that she overcounted and did not have an opportunity to pause and figure out the solution.

To see some activities with built-in scaffolding suggestions, check out these DREME resources:

- Make the Math Easier/Harder and Make the EF Easier/Harder tables in the DREME Guided Small Group Math Activities provide scaffolds for math and EF.
- Activity Modification sections in the DREME Center/Small Group Math Activities include ways to vary activities to make the math more or less challenging.
- Modification sections in DREME Math Moments include suggestions for increasing or decreasing the challenge and adding variety.

How to Scaffold Effectively

- Learning how to scaffold takes time and practice.
- Some scaffolding ideas may work better for some children than for others. Teachers and their students benefit from trying different ways of changing a task depending on children’s knowledge, abilities, or experiences.
- There are various types of scaffolding. Here, we focused on one type. Another form of scaffolding is to break down activities into several smaller, more manageable steps. To learn more, see the DREME article on intermediate steps.