

CORE SKILL: REGULATE

Working Memory



What You Need to Know

Working memory is a child’s ability to remember and use relevant information while in the midst of a task. It is the information children can hold in their minds *in the moment* that helps them complete a task (e.g., follow directions, play a game) or remember rules (e.g., use walking feet). Can you remember a time when you forgot your list at the grocery store? You were using your working memory as you tried to remember what was on your list while working through it to complete your shopping. Preschoolers are still in the beginning stages of developing their working memory skills. It is still hard for them to keep a rule or instruction in mind, especially in a busy classroom. You can help them by playing games that challenge their working memory, talking through your own mental processes, and by modeling strategies for remembering and holding information in your mind. Be sure to keep your expectations aligned with what children can do.

Things to Consider

Below is an example of a child trying to follow their teacher’s instructions that highlights how working memory skills impact their performance.

- ◆ Early in the year, using a visual chart, a child’s teacher asks a child to go to the bathroom, wash their hands, and go to their mat. They are able to use the bathroom and *mostly* follow the handwashing chart, but they get distracted and begin playing with the soap – forgetting that they need to return to their mat.
- ◆ Later in the year, their teacher asks them to do the same thing. This time, they are able to complete the task successfully. They still enjoy lathering and playing with the soap, but they are able to hold in their memory that the next step is to return to their mat and does so successfully (after a few extra moments in the sink!).

Development of Working Memory

Between 36 and 48 months, children may:	Between 48 and 60 months, children may:
Hold small amounts of information in their mind (e.g., 2-step directions) to successfully complete simple tasks.	Hold an increasing amount of information in mind in order to successfully complete tasks.

Setting the Stage

Materials and activities that will support the development of working memory:

- ◆ Use graphic organizers, visuals, or charts to help children remember chunks of information (e.g., what they found out about snakes, or how many items rolled, what tasks have to be completed).
- ◆ Movement games: play games that require children to remember a movement that is associated with a sound or sign (e.g., jump on one foot when you play drums but spin when you clap your hands).
- ◆ Imitation games: play “Simon Says” or other imitation games building up to multiple steps.
- ◆ Card games: games that require children to remember the cards that they have and the rules of the game in the moment.
- ◆ Memory games: games that require children to match items or search for a certain item.



Intentional Teaching Practices to Build Working Memory

OBSERVE	<p>OBSERVE</p> <p>Watch closely to see how much information children are holding in their mind during a task. Are they able to remember classroom rules or follow multi-step directions independently? Do they get distracted and leave their task or are they able to go back to it? Which children could benefit from extra support?</p> <p>Much of supporting working memory lies in making sure your expectations are reasonable. Are there activities or transitions where more than 1 or 2 children seem to struggle to stay on task? This is likely an indication that the working memory demands are too great for children’s skill level.</p>
FOCUS	<p>Narrate Use of Working Memory</p> <p>Draw attention to how children can use strategies for keeping things in mind.</p> <ul style="list-style-type: none">◆ Using visualizations: “It’s time to clean-up. Let’s look at the pictures in the block center that show us where things go to help us remember.”◆ Self-talk: “You are drawing a picture and you are talking to yourself as you draw it. That is helping you remember your plan for your picture.”◆ Using organizers or charts: “We are using this recipe card to help us remember all of the steps we need to follow to make applesauce. This recipe helps us make sure we don’t forget anything. And, it helps us do the steps in the right order. That is really helpful.”
SCAFFOLD I	<p>Give Simple and Clear Comments</p> <p>Children will be more successful if the amount of information they are expected to remember in the moment is reasonable and limited. For example, if instructions are simple (one thing at a time) and clear (tell a child exactly what to do instead of what not to do).</p> <ul style="list-style-type: none">◆ “Go put your shoes on,” (specific) rather than, “Get ready to go outside,” (vague). <p>You may need to provide more scaffolding for particular children or for particular tasks by breaking tasks down into manageable steps.</p> <ul style="list-style-type: none">◆ You notice a child has trouble remembering the rules of the game, so you give simple reminders at each step. “Okay, they asked for a 3, if you have a card with the number 3 give it to them. Okay, no, then the next step is to draw from the pile.”
SCAFFOLD II	<p>Use Cues and Visuals</p> <p>Visuals serve as external reminders as children develop their working memory. They help children remember what to do in the moment or break down multi-step activities.</p> <ul style="list-style-type: none">◆ Picture charts showing children the steps in an activity (e.g., cooking, steps for washing hands or preparing to leave for the day).◆ Signs that remind children what to do in the moment (e.g., sign showing “sit” or “Shh”).◆ Hand motions (e.g., “We have to do 3 things before we leave (<i>holding up finger</i>). We have to clean up (<i>holding up 2nd finger</i>), then get our coats (<i>holding up 3rd finger</i>), then line up. (<i>Review each step with each finger</i>) Use your fingers to help you remember that there are 3 things.” <p>Remember, visuals and cues will only be effective if you regularly refer to them. Just creating them and hanging them in your classroom is not enough.</p>
KEEP IT GOING	<p>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.</p>