

# Making Instruction Accessible for Early Math

Engaging learning environments have pre-planned instructional supports aimed at individual learners' participation and access to the learning content and objectives.

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| Language Supports      | <ul style="list-style-type: none"> <li>Gain the learner's attention by using their name first and then making eye contact.             <ul style="list-style-type: none"> <li>If eye contact is overstimulating, use other cues from the child to know when they are listening and ready to learn.</li> </ul> </li> <li>Use shorter, simple sentences.</li> <li>Use a slower speech rate to facilitate the processing of information (but not so slow as to lose the meaning of the message).</li> <li>Use exaggerated gestures, vocal tones, and facial expressions to help deepen children's understanding of the expectations and motivate them to learn.</li> <li>Model the desired language. If the child is non-verbal or responds with a single word, reply by modeling a full sentence. If child is able, have them repeat the modeled sentence.</li> </ul> |
| Cognitive              | <ul style="list-style-type: none"> <li>Repeat instructions and expectations frequently. If able, have the child repeat instructions back to you to check for understanding.</li> <li>Use first/then language for each step of the activity (First, we do --- _____, Then we will --- _____.)</li> <li>Break down oral instructions into small chunks– use visuals to help describe each step and frequently check for understanding. Do not make steps complex, keep them simple. Role play each step if needed.</li> <li>Use a backward chaining approach – breaking down steps and teaching them in reverse order to provide successful experience of completion at all stages of the task. This approach gradually maximizes learners' workload.</li> <li>Provide immediate and specific feedback.</li> </ul>  |
| Introducing Vocabulary | <ul style="list-style-type: none"> <li>Explicitly teach new terms in child friendly language while using real objects that represent the new vocabulary term.</li> <li>Provide examples of the new term.             <ul style="list-style-type: none"> <li>Use the term with concrete examples.</li> <li>Use the term with its opposite – ex. This is long. This is short.</li> <li>Provide the context of how it is used (We can use a ruler to measure things.)</li> </ul> </li> <li>Children need to hear a new word 15-30 times before they can use it correctly, so use the new word across multiple learning experiences and in meaningful conversations.</li> <li><u>Create a visual word bank of new math terms for children to reference *this is also helpful for DLL students</u></li> </ul>  |
| Questioning            | <ul style="list-style-type: none"> <li>Use open-ended questions</li> <li>Allow plenty of wait time and multiple opportunities for learners to contribute their answers/predictions.</li> <li>Do not answer for the student if they do not respond immediately, instead rephrase questions and give clues if needed.</li> <li>Watch for learner's response to questions through their actions. Orally describe the action and connect it to the learning objective.</li> <li>Develop a system for the learner to ask for help.</li> </ul>  |