Instructional Resource Guide-
Updated from NCSC

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2019

Instructional Resource Guide on Prompting and Instructional Strategies

Purpose of this Guide:

The Instructional Resource guide is written to provide guidance for teachers regarding both evidence-based and research-based instructional strategies which may be used to teach students with significant cognitive disabilities in inclusive settings. This guide is designed to support instruction of this population by either general education or special education teachers in inclusive classrooms.

How to use this Guide:

The guide begins with teachers finding a consistent response mode for every student and then describes evidence-based strategies for instruction of this population of students given an inclusive context. Sample scripts are included that allow teachers to have a model for how to utilize the strategies embedded within a lesson. These scripts are models that teachers can adapt once either the priority challenging content or an error pattern is identified for students.

Systematic Instruction

Systematic Instruction strategies are based upon teaching that is focused on specific, measurable responses within either be discrete (“What sound does /ch/ make?”) or a chained task (solve a word problem using algebra), and that are established through the use of defined methods of response prompting (e.g., constant time delay for discrete skills; a least intrusive prompting hierarchy for chained tasks) and feedback (e.g., error correction, praise) based on the principles and research of Applied Behavior Analysis.

Each strategy presented will potentially include information about prompting, feedback, the format of instruction, the use of task analyitic instruction, and length of learning sessions. Teachers can consider this information when planning for the use of strategies to be embedded within lessons.

Time Delay

There are two types of time delay, constant time delay and progressive time delay. This Instructional Resource Guide focuses on Constant Time Delay; however, it does provide a brief explanation of Progressive Time Delay.

Additional Prompting Strategies

There are additional prompting strategies that are not covered in this instructional resource guide that may be helpful when teaching your students. These include, but are not limited to most to least prompting and graduated guidance. Descriptions of these can be found in Collins (2012).

Additional Resources

This brief guide is meant for quick reference. The following are teacher-friendly resources for educators who would like to learn more about these procedures.

Collins, B. (2012). *Systematic instruction for students with moderate and severe disabilities.* Baltimore, MD: Paul H. Brookes.

Alberto, P., & Troutman, A. (2012). *Applied behavior analysis for teachers*. 9th Ed. Upper Saddle River, NJ: Pearson.

Finding a Response Mode

It is important to identify the best way for your student to show what they know in each lesson. Here are some options to consider:

Point to the correct response when given an array

The number of options in the array may vary depending on the student's current skills. An array of 4 is often used with one correct answer, at least one plausible incorrect answer, and two other distractors. Be sure to vary the location of the correct answer in the array. This array can be placed on the students' communication system.

Pull-off

Some students have difficulty pointing but may be able to make a selection when the responses are attached to a page. The array of 4 options is used, but the student pulls the correct response.

Eye gaze

Students who do not have the motor skills to point, but have vision, may be able to indicate the response by looking at the correct option. The array can be attached to each corner of a piece of see-through plexiglass (available from most hardware stores). By looking through the plexiglass, the teacher can see where the student focuses his or her eyes to indicate the answer.

Say or Type

Some students can verbalize the correct answer. This answer may be given after viewing an array of options or by generating the answer when asked a question. Other students may be able to generate the answer by typing a response. Saying or typing the answer provides students with the most flexibility to describe what they know.

Show

Some learning can be demonstrating through showing the answer. The student may be able to indicate the area of the rectangle by moving his or her hand across the shape. Or, a student may answer a comprehension question by pantomiming the answer.

Write or type on computer

Sometimes the student may be able to write the answer, for example, by writing the correct number in an equation or writing the name of the main character in a story.

Use material from the lesson

Students may be able to show the correct math answer by using a number card or plastic numbers or with other manipulatives. Similarly, in language arts, the student may use a picture on the page in the book or prop that is used with a story to answer a comprehension question.

Remember: the response mode needs to be something students can do without assistance once they learn the material.

Embedded Trial Instruction

Embedded instruction is when a session or learning segment is naturally distributed or embedded within and across activities throughout the day for a student (Collins, 2012). Embedded trial instruction is often used in inclusive settings to implement systematic learning sessions within on-going routines or natural breaks in activities. Embedding trials of constant time delay has been found to be an evidence-based practice for teaching academic skills to students with the most significant cognitive disabilities in inclusive settings. The other strategies included in this manual can be embedded as well. Embedded trial instruction may be a better fit for inclusive settings than traditional systematic instructional formats often done in self-contained settings where students are given consecutive, discrete learning trials in a learning segment.

Some Tips for Embedded Trial Instruction

Who has to implement the embedded trial instruction?

Peers, paraprofessionals, the special education teacher, or the general education teacher can embed trials within a general education lesson. In fact, peers may have the ability to provide more opportunities for practice with a student than other adults because they are sitting adjacent to the student and can do so at natural breaks in activities. Students can learn, review, and/or generalize a variety of content using embedded instruction. Some examples across domains are math formulas or symbols, science practices commonly used within lab experiments, social studies terms and relationships [such as cause/effect], grammar usage, and practices to answer inferential questions.

Technology can be used to deliver embedded trials as well. For example, commercially-developed apps or teacher-made PowerPoint presentations shown on tablets or small touchscreen computers can be used that are tailored to the course content. In a science lesson with challenging vocabulary, an Ipad can be programmed to help a student review the vocabulary during breaks or even when the student encounters the words within the text to reinforce understanding of the vocabulary terms.

Can embedded trial instruction only be done with constant time delay?

No, embedded trial instruction can be done using any prompting strategy! For example, it can be done with simultaneous prompting (during acquisition of new learning), the system of least prompts (to only use prompts when students need support), or task analytic instruction (specifically with practices and processes). For example, a task analysis may be used and referred to during a lesson as a student is learning to follow the steps of a lab experiment and generalize their understanding to new materials. The steps within the task analysis are naturally embedded for instruction and reference within the lab.

How do I choose the time for embedding trials?

Students with significant cognitive disabilities typically need multiple opportunities to engage with content during a lesson to support learning. Embedded instruction can occur at just about any point within a lesson or even between lessons. A few examples of when targeted skills may be embedded are during a warm-up activity, within teacher direction, during independent practice activites, or during

center time. Careful consideration should be made in selecting the time to prevent the students with the most significant disabilities from being excluded during instruction with their peers.

Constant Time Delay (CTD)

CTD is a form of errorless learning that can be used with discrete responses or responses that require a single action or response that can be measured (e.g., number or letter sound identification; definitions of vocabulary words, identification of story elements [character, setting, plot, conflict, resolution], use of punctuation or correct grammatical terms). If a student makes a lot of errors through guessing, it may take longer to learn the response. CTD teaches the student to WAIT for help if unsure of the correct answer, but ANTICIPATE (answer before the prompt) when sure. CTD can be done using embedded trial instruction and can be implemented by a variety of interventionists (peer, paraprofessional, general education teacher, or special education teacher) as well. **Watch this video** of a general education teacher using CTD in a classroom of students who are working on making sounds of diagraphs. You will see the teacher using CTD during a game with all students getting a turn to make the sound. Another option for using CTD in a general education classroom is using active student responding in small groups in response to the cue to respond (like “Get ready.” and teacher snaps fingers) as long as the student has enough time to process the information prior to the cue for a response.

CTD follows a specific format. First, the “teacher” uses a zero delay round to introduce the skill. The “teacher’ gives the cue to respond and the prompt together to ensure correct responding. The student can only make an error if he or she does not imitate this response (if this happens, a better prompt may be needed or the student may need to be reminded to attend closely).

After a few sessions with the “teacher” delivering the information at the zero round, the “teacher” will wait a few seconds before giving the prompt to allow the student to provide the correct answer.

Zero Delay Round

Let’s use the use of punctuation in sentence writing as our example. The following are the directions for how to use the zero delay round during initial instruction.

Provide the task direction* and immediately give the controlling prompt (or a model of the correct response) to teach the child the correct response. Have the child make the response after the controlling prompt is provided for errorless learning. Reinforce the child’s correct response.

For example (select the correct punctuation):

1. Teacher says “Let’s read this sentence. ‘My dog is brown and white’. What punctuation should we use?” while pointing to the card that has a period.

2. Student responds by pointing to the period.

3. Teacher reinforces the correct response by saying, “Good, that is a period. We use a period at the end of a complete sentence that makes a statement like what color the dog is.”

Time Delay Round

After several opportunities to respond in sessions at zero delay, move to a 3-5 second delay (pick a delay time that is appropriate for your student to start responding, but do not vary that delay length). The following are the directions for how to use the delay round during instruction.

Tell the student “Now it is your turn. Remember if you don’t know the answer, wait and I will help you.” The task direction is given (target stimulus); wait 3-5 seconds delay time for the student to respond.

If no response after delay, then the controlling prompt (i.e., a model of the correct response) is used. After the student gives the correct response, offer praise. Record data (prompted correct: P).**

If an incorrect response is given prior to the model of the correct response (during the wait time), provide error correction procedures (usually the controlling prompt to prompt a correct response) and remind the student to wait if not sure. Record data (incorrect/error: -).**

If multiple errors occur, return to the zero delay condition.

For example:

1. Teacher says “Let’s read this sentence. ‘My dog sleeps in a dog bed on my floor’. What punctuation should we use?” and waits 4 seconds (allowing the student to have a chance to answer).

2. IF the student independently points to the period, reinforce the correct response by saying “Right! That is a period.” and record the data (independent correct: “+”).

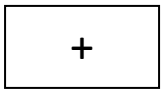
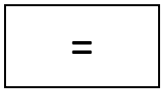
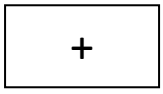
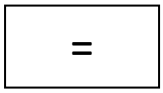
3. IF the student waits and does nothing, after 4 seconds the teacher points to the period. After the student points to the period, teacher records data (prompted correct: “P”).

4. IF the student points to the wrong answer, teacher immediately points to the correct answer, does not reinforce and records the data (error: “-“).

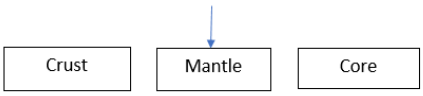
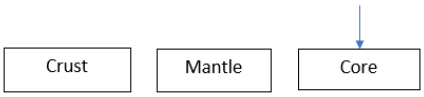
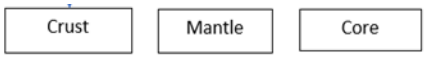
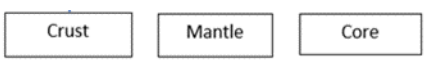
*There is a difference between a task direction or cue and prompt. The task direction is just that- direction to complete a task such as “Answer the questions after reading the passage.”. A cue is something in the environment to indicate something needs to occur (e.g., the teacher standing in front of the classroom means class is about to begin). A prompt is some level of support provided by the teacher to the student to increase the chance the student will make a correct response (in the example for time delay, it is pointing at the correct punctuation mark).

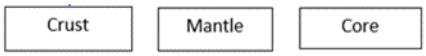
**We encourage data collection during any session when the student can make an independent response. While it may not be easy to collect data during embedded instruction, coming up with a structure to collect data regarding student performance will be helpful for several reasons including informs the use of strategies in which the student experiences success and makes progress, informs IEP development of content goals and objectives, and can be shared with parents as formative data.

Sample Script for CTD (Teaching Expressive Symbol Identification)

Materials	Teacher Says/Does	Student Response	Teacher Feedback
Zero Delay Round (Complete multiple trials/days as needed at the zero delay round)			
Card with + on it: 	"What symbol is this? Plus"	"Plus"	"Good, this is the plus sign, we use it to add."
Card with = on it: 	"What symbol is this? Equal"	"Equal"	"Good, this is the equal sign, it means the same."
Card with - on it: 	"What symbol is this? Subtraction"	"Subtraction"	"Good, this is the subtraction sign, we use it to subtract or take away."
4 Second Delay Round			
Card with + on it: 	"What symbol is this?" Wait 4 seconds.	Student responds "plus" before additional prompting.	"Good! You got it! This is the plus sign, which we use to add."
		Student responds incorrectly before additional prompting.	"Plus, this is the plus sign. If you don't know the answer, wait and I'll help you."
		Student waits (does not respond within 4 seconds).	"Plus, say plus. Good."
Card with = on it: 	"What symbol is this?" Wait 4 seconds.	Student responds "equal" before additional prompting.	"Good! You got it! This is the equal sign, it means the same."
		Student responds incorrectly before additional prompting.	"Equal, this is the equal sign. If you don't know the answer, wait and I'll help you."
		Student waits (does not respond within 4 seconds).	"Equal, say equal. Good."
Card with - on it: 	"What symbol is this?" Wait 4 seconds.	Student responds "subtraction" before additional prompting.	"Good! You got it! This is the subtraction sign, which we use to subtract or take away."
		Student responds incorrectly before additional prompting.	"Subtraction, this is the subtraction sign. If you don't know the answer, wait and I'll help you."
		Student waits (does not respond within 4 seconds).	"Subtraction, say subtraction. Good."

Sample Script for CTD (Teaching Receptive Word Identification)

Materials	Teacher Says/Does	Student Response	Teacher Feedback
Zero Delay Round (Complete multiple trials/days as needed at the zero delay round)			
**Note: distracters can be made very different in the beginning (e.g., a card with a picture or word of an unrelated item), but eventually should be similar items, such as cards other targeted symbols (e.g., crust, mantle, core).* ***Note: Shuffle cards and distracters between every trial.*			
Card with the word Crust on it and two distracters: 	Point to word cat and say "Touch Crust."	Student touches word Crust.	"Good, that says Crust."
Card with the word Mantle on it and two distracters: 	Point to word dog and say "Touch Mantle."	Student touches the word Mantle.	"Good, that says Mantle."
Card with the word "Core" on it and two distracters: 	Point to word hat and say "Touch Core"	Student touches the word Core.	"Good, that says Core."
4 Second Delay Round			
Card with the word Crust on it and two distracters: 	"Touch Crust." Wait 4 seconds.	Student touches Crust before additional prompting.	"Good! You got it! That says Crust."
		Student responds incorrectly before additional prompting.	Point to the word Crust. Say: "This is Crust. If you don't know the answer, wait and I'll help you."
		Student waits (does not respond within 4 seconds).	Point to the word Crust. Say: "This is Crust." After they point say "Good."
Card with the word Mantle on it and two distracters: 	"Touch Mantle." Wait 4 seconds.	Student touches Mantle before additional prompting.	"Good! You got it! That says Mantle."
		Student responds incorrectly before additional prompting.	Point to the word Mantle. Say: "This is Mantle. If you don't

Materials	Teacher Says/Does	Student Response	Teacher Feedback
			know the answer, wait and I'll help you."
		Student waits (does not respond within 4 seconds).	Point to the word Mantle. Say: "This is Mantle." After they point say "Good."
Card with the word Core on it and two distracters: 	"Touch Core." Wait 4 seconds.	Student touches Core before additional prompting.	"Good! You got it! That says Core."
		Student responds incorrectly before additional prompting.	Point to the word Core. Say: "This is Core. If you don't know the answer, wait and I'll help you."
		Student waits (does not respond within 4 seconds).	Point to the word Core. Say: "This is Core." After they point say "Good."

Some Tips for Using Time Delay

What do I do if my student keeps guessing/ making errors?

Progressive Time Delay. If students begin to make errors whenever the teacher delays the prompt, it may be better to use Progressive Time Delay (PTD). In this approach, the prompt is delayed by a very small increment of time (e.g., 2 seconds). Then the delay is gradually and systematically lengthened, allowing the student more time to respond independently.

Examples:

- 0 seconds, 1 second, 2 seconds, 3 seconds
- 0 second, 2 seconds, 4 seconds, 6 seconds

The teacher can also use “Wait training.” Begin with blank index cards and teach the student to point where you point (or say what you say) after waiting for a specified amount of time.

What do I do if my student always waits/ never anticipates a correct response?

Try using a longer delay interval. Another option is the need for and use of more potent reinforcers for independent responses only. The use of reinforcers may motivate the student to anticipate the response. Tell the student how to earn the reinforcer (answer without help).

What if the student does not imitate the prompt?

For some students who do not imitate a model, an alternative is to use physical guidance as the controlling prompt.

What if the student responds by eye gazing?

The prompt can still be pointing to the correct option but they can do so in eye gaze form. If this is not salient enough, leave your finger on the correct answer until the student selects it with a sustained eye gaze.

Can I use CTD with a chained response like calculator use?

Yes. On the first day model each response (each step of the task analysis) and have the student repeat it (e.g., point to the key on the calculator, don’t actually press it. Let the student actually press it). Then on the time delay trials, wait the designated number of seconds before prompting each step.

For more ideas, see Additional Resources or consult with an expert in applied behavior analysis.

Simultaneous Prompting

Simultaneous prompting is a form of nearly errorless learning that can be used with both discrete (e.g., phonics and phonemes; vocabulary words; fact recall in math; map locations or landforms) and chained responses (e.g., steps for solving equations). Simultaneous prompting involves a daily test session prior to the teaching session to see what tasks or skills students have acquired independently prior to teaching. This test session is important to give students the opportunity to respond independently and show what they know prior to teaching. It is like the use of a pre-test in the general education class prior to instruction on a unit and can easily be completed during the warm-up. The teaching session is performed with a 0-second delay just as in the CTD procedure. In other words, the instructor provides the controlling prompt, modeling exactly what the student is expected to do, followed by an immediate chance for the student to perform the skill. Simultaneous prompting, including both the test session and teaching session, can be easily delivered using the embedded trial instruction format in inclusive settings. A variety of individuals can utilize this procedure as well (e.g., peers, paraprofessionals, general education teacher, special education teacher).

First, use a test session to see what tasks/skills the student can do independently. Give the cue and wait for the student to respond. Record whether the response is correct or incorrect. This can be done directly onto a data sheet, or it can be done rapidly by sorting the materials into a correct or incorrect pile, such as if using flashcards and then transferring the information to a data sheet after the test session has ended. The student's performance can be used to set a mastery criterion or level of expectation (e.g., the student can do *all* steps correctly without instruction; the student can identify *four out of five* landforms independently). The incorrect responses are then used during the teaching session.

Next, use teaching sessions with the 0-second delay format. Give the cue to respond (present the "m" card and say "Say the sound.") and controlling prompt (model "mmm") together to ensure correct responding. The student can only make an error if he or she does not imitate this response (if this happens, a better prompt may be needed or the student may need to be reminded to attend closely). No data is collected during the teaching sessions.

The "tips for using constant time delay" also can be applied to the simultaneous prompting procedure.

Materials	Steps	Teacher Says/Does	Student Response	Teacher Feedback
TEST Session (Assess student first to see which tasks/skills the student can do independently)				
5-10 flashcards for individual letter sound identification, digraphs, or diphthongs	1	Deliver the attentional cue. Example: "Eyes on cards."	Student should look in direction of instructor or materials.	"Good looking! Let's start!"
	2	Shows card and delivers the task direction. Example: "Say the sound."	Student should perform or attempt target behavior/task.	No feedback. Proceed to step 3.

	3	Wait for a predetermined number of seconds (i.e. response interval) for the learner to respond. Example: Response interval wait time could be 2s-5s.	Time for student to perform target behavior.	*No prompting or error correction is given during test session*. If needed, provide general verbal praise, "You are working really hard!"
	4	Progress through the cards until all cards have been shown and the student has had an opportunity to respond. Record data on correct/incorrect responses.	Student waits for next trial to begin.	*No prompting or error correction is given during test session*. If needed, provide general verbal praise, "You are working really hard!"
TRAINING Sessions				
5-10 flashcards for individual letter sound identification, digraphs, or diphthongs	1	Deliver the attentional cue. Example: "Eyes on cards."	Student should look in direction of instructor or materials.	"Good looking! Let's start!"
	2	Deliver the task direction. Example: "Listen to me say the sound, and then you say the sound."	Student waits.	No feedback. Proceed to step 3.
	3	Show the card. Immediately use the least intrusive prompt necessary for the learner to perform the correct response (i.e., controlling prompt), praising all correct responses and correct all errors. Example: Show "m" card and say /mmm/.	Student should perform or attempt target behavior/task. Example: Student repeats /mmm/.	"Great job! 'M' makes the sound /mmm/."
	4	Proceed through all trials. Example: Teacher says, "let's try another one." Show next card, model sound, and have student repeat sound. Then move to the next card/sound until all flashcards have been shown.	Student waits for next trial to begin.	Provide specific verbal feedback for all cards.

System of Least Prompts (also known as Least to Most Prompting)

The System of Least Prompts can be used with a task analysis (e.g., entering a multistep equation into a calculator) or a discrete task with a single response (e.g., identifying state capitals). The system of least prompts can be implemented as embedded trial instruction by a variety of individuals (peer, paraprofessional, general education teacher, or special education teacher) as well. **Watch this video** of a student demonstrating the concept of what a multiplication problem represents (sets and groups). This student is working step by step through how to create the groups and sets to represent the multiplication problem (following a task analysis) and requires prompting at different levels for each step to be able represent the problem. The person in the video supporting the student is the special education teacher within the general education classroom.

The System of Least Prompts is similar to when a teacher leads a student to a correct response when learning in the general education classroom. The supports provided in this system are very specific and follow a pattern. The system is only utilized when a student is unable to answer independently, just as a teacher would support any student to learn the content. The system can be embedded naturally within any task (e.g., sorting economic outcomes for a given trade policy using a T chart) and can be utilized for each step or item. A hierarchy of prompts (e.g., verbal, gesture/model, physical) with a response time interval between each level is used with each step of the task analysis or item until the student makes the targeted response.

Guidelines for Using System of Least Prompts

1. Select 3 – 4 prompts in the hierarchy (e.g., verbal, gesture/model, physical (partial or full). Remember these prompts can be adapted for students with a range of sensory impairments.

   Examples:

   - Students with visual impairments: verbal, partial physical, full physical
   - Students with hearing impairments: sign/gesture, model, physical

2. Provide the task direction/natural cue (e.g., “Use your calculator to solve the problem”)

3. Always give the student an opportunity to make the correct response before providing any prompting on every step or item. The student may need a model prompt for step 3 to use the calculator but may be able to step 4 with a verbal prompt.

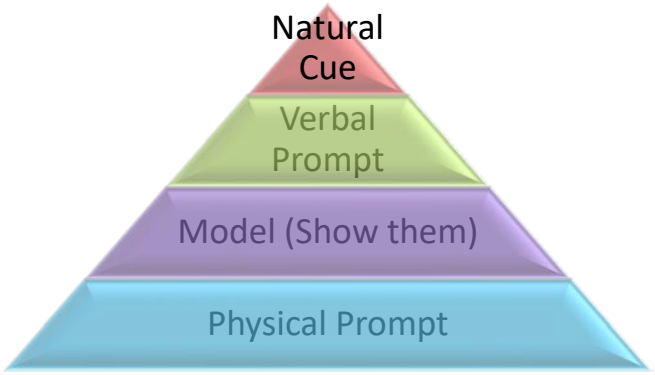
4. Use the least intrusive prompt first and progress to more intrusive prompts until the learner responds correctly (usually 3 to 5 second response time between prompts but this is student dependent).

5. If the student makes an error, immediately provide the next prompt in the hierarchy.

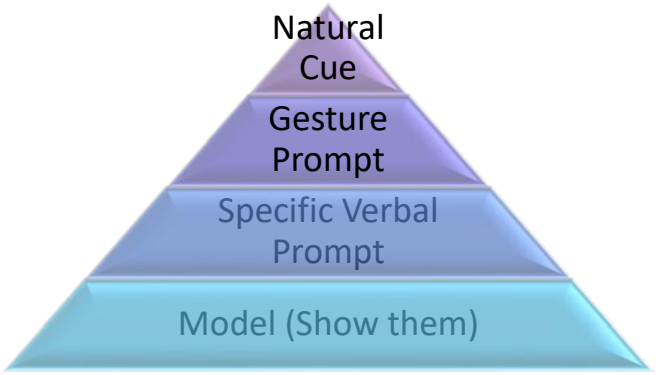
6. Encourage and praise the student after independent, correct responses.

Examples of Prompting Hierarchies

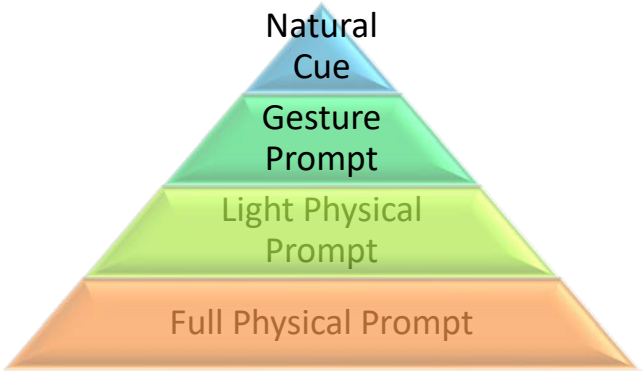
Traditional Prompting Hierarchy:



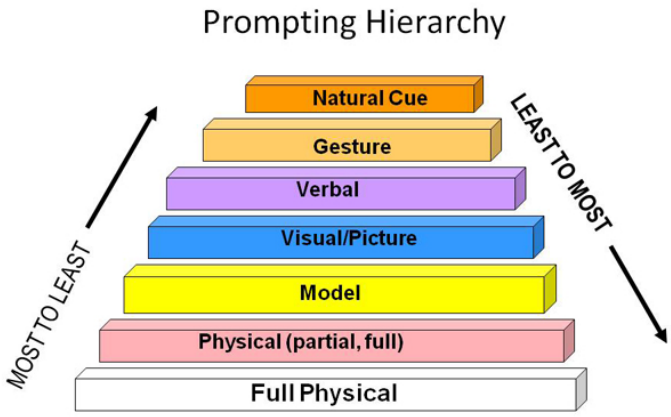
Prompting Hierarchy for Academic Task:



Prompting Hierarchy for Motoric Response:



Choose 3-4 prompts moving from least intrusive to most intrusive. Please note that depending on the nature of the task, some prompts may be more intrusive than the preceding one on this figure. For example, showing a student a picture card, such as the next step on the schedule, may be less intrusive than verbally prompting the student to complete the next task. Therefore, the least intrusive prompting hierarchy for checking a schedule may be a visual/picture prompt -> verbal prompt -> model prompt -> physical prompt.



Sample Script for a Task Analysis with Embedded System of Least Prompts (Calculator Use)

Steps/Materials	Teacher Says/Does	Student Response	Teacher Feedback
**Note: In this example, if the student presses the wrong button, the teacher will have to clear the calculator and re-enter the equation up to the step the student was working on when the error occurred. To try to avoid this, be prepared to quickly redirect the student's hand if it is clear the student is about to make an error.*			
1. Student has worksheet with 8 x 12 = _____ on it, a calculator, and a pencil.	"Use your calculator to solve this equation: Eight times twelve equals?"	Correct: Student enters 8 into calculator.	"Good." Or wait for them to initiate the next step (2).
		Student does not respond or redirection is needed.	Wait 3-5 seconds. Provide a verbal prompt "Push 8."
		No response or redirection after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the 8 on the calculator).
		No response or redirection after being given a gesture prompt.	Wait 3-5 seconds. Provide a physical prompt (take their hand and help them press 8 in the calculator).
2. See above.	N/A (student should start the next step automatically after completing the previous step). Teacher can say "What's next?" or "Keep going."	Correct: Student enters the x into calculator.	"Good." Or wait for them to initiate the next step (3).
		Student does not respond or redirection is needed.	Wait 3-5 seconds. Provide a verbal prompt "Push the x."
		No response or redirection after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the x on calculator).
		No response or redirection after being given a gesture prompt.	Wait 3-5 seconds. Provide a physical prompt (take their hand and help them press x in the calculator).
3. See above.	N/A (student should start the next step automatically after completing the previous step). Teacher can say "What's next?" or "Keep going."	Correct: Student enters 12 into calculator.	"Good." Or wait for them to initiate the next step (4).
		Student does not respond or redirection is needed .	Wait 3-5 seconds. Provide a verbal prompt "Push 12."
		No response or redirection after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the 12 on the calculator).
		No response or redirection after being given a gesture prompt.	Wait 3-5 seconds. Provide a physical prompt (take their hand and help them press 12 in the calculator).
4. See above.	N/A (student should start the next step automatically after completing the previous step). Teacher can say	Correct: Student enters = into calculator.	Or wait for them to initiate the next step (5).
		Student does not respond or redirection is needed.	Wait 3-5 seconds. Provide a verbal prompt "Push =."
		No response or redirection after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the = on the calculator).

Steps/Materials	Teacher Says/Does	Student Response	Teacher Feedback
	"What's next?" or "Keep going."	No response or redirection after being given a gesture prompt.	Wait 3-5 seconds. Provide a physical prompt (take their hand and help them press = in the calculator).
5. See above.	"What is eight times twelve?"	Correct: Student writes/stamps/says/selects 96.	"Good work! Eight times twelve equals ninety-six."
		Student does not respond or redirection is needed.	Wait 3-5 seconds. Provide a verbal prompt "Look at the calculator."
		No response or redirection after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the 96 on the calculator).
		No response or redirection after being given a gesture prompt.	Wait 3-5 seconds. Provide a physical prompt (take their hand and help them write/stamp/ say/select 96).

Sample Script for System of Least Prompts with a Discrete Task

(Text Based Literal Recall)

Materials	Teacher Says/Does	Student Response	Teacher Feedback
***Note: Student either reads an appropriate leveled text or has the appropriate leveled text read to them prior to asking literal recall questions. For example:* It was early morning when Ben woke up. He was hungry for breakfast so he walked into the kitchen. Ben's mom was making pancakes. She put two pancakes with syrup and butter on his plate. Then she said "You better eat quickly, the bus comes at 8:00, and you don't want to miss it." **Note: If needed, students may also have response options provided. Response options should include all types of possible responses (e.g., what, who, where, when, what doing both from the story and non-plausible options).*			
Student has entire text with adaptations if needed (e.g., Braille, picture symbols, objects, etc.).	Teacher asks what question: "What was mom cooking?"	Correct: Student responds "pancakes."	"Good. She was making pancakes!"
		Student does not respond or makes an error.	Wait 3-5 seconds. Remind the student of the rule, "What is a thing. Listen for a thing." Reread the text to the student and ask the question again.
		No response or error after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response or error after sentence is reread.	Wait 3-5 seconds. Provide a verbal model "Pancakes." Have student repeat the model.
Student has entire text with adaptations if needed (e.g., Braille, picture symbols, objects, etc.).	Teacher asks who question: "Who woke up early in the morning?"	Correct: Student responds "Ben."	"Good. Ben woke up early in the morning!"
		Student does not respond or makes an error.	Wait 3-5 seconds. Remind the student of the rule, "Who is a person. Listen for a person." Reread the text to the student and ask the question again.
		No response or makes an error after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response or makes an error after sentence is reread.	Wait 3-5 seconds. Provide a verbal model "Ben." Have student repeat the model.
Student has entire text with adaptations if needed (e.g., Braille, picture symbols, objects, etc.).	Teacher asks where question: "Where was Mom?"	Correct: Student responds "kitchen."	"Good. Mom was in the kitchen!"
		Student does not respond or makes an error.	Wait 3-5 seconds. Remind the student of the rule, "Where is a place. Listen for a place." Reread the text to the student and ask the question again.

Materials	Teacher Says/Does	Student Response	Teacher Feedback
		No response or error after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response or error after sentence is reread.	Wait 3-5 seconds. Provide a verbal model “Kitchen.” Have student repeat the model.
Student has entire text with adaptations if needed (e.g., Braille, picture symbols, objects, etc.).	Teacher asks where question: “What was Mom doing?”	Correct: Student responds “making pancakes.”	“Good. She was making pancakes!”
		Student does not respond or makes an error.	Wait 3-5 seconds. Remind the student of the rule, “What doing is an action. Listen for an action.” Reread the text to the student and ask the question again.
		No response or error after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response or error after sentence is reread.	Wait 3-5 seconds. Provide a verbal model “Making pancakes.” Have student repeat the model.
Student has entire text with adaptations if needed (e.g., Braille, picture symbols, objects, etc.).	Teacher asks when question: “When is the bus coming?”	Correct: Student responds “8:00.”	“Good. The bus comes at 8:00!”
		Student does not respond or makes an error.	Wait 3-5 seconds. Remind the student of the rule, “When is a time. Listen for a time.” Reread the text to the student and ask the question again.
		No response or error after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response or error after sentence is reread.	Wait 3-5 seconds. Provide a verbal model “8:00.” Have student repeat the model.

Graphic Organizers

Graphic organizers are instructional tools used to aid in comprehension and can accompany all of the instructional strategies provided in this manual. They can be used to organize key information, such as from a text read aloud or from a word problem in math. For students with the most significant disabilities, graphic organizers should be paired with visual supports to help non-readers and emerging readers. Graphic organizers used in general education settings, such as Venn Diagrams, Story Maps, KWL Charts, Bubble Maps, or T Charts can be adapted with visual supports to support all students in inclusive settings as they are an example of a Universal Design for Learning Support. It is important to first understand the purpose of the activity to decide which organizer is best suited to support learners to arrange the information.

Sample Graphic Organizer to Accompany the Script for System of Least Prompts with a Discrete Task (Text Based Literal Recall)

Below is a graphic organizer for the prior page's example of using the system of least prompts to accompany the literal recall questions. As presented, it is a visual support for a student. By adding rows to the right, students could use this to help with their comprehension.

Rules for Answering Questions	
 When you hear	 Listen for -
What?	a thing
Why?	"because"
Who?	a name
When?	a time or date
Where?	a place

Adapted from Mims, Hudson, & Browder (2012). Alt text is provided for the image.

Model, Lead, Test

Model, lead, test is also known as “I do,” “we do,” “you do” or explicit instruction. It is often a strategy already used in a general education setting by the general education teacher to teach daily concepts, skills, or strategies. An example is solving a math equation: Students first watch the teacher model all the steps; then, the class as a whole solves problems with the teacher as a facilitator or model; and last, the students work independently to solve problems on their own. Model, lead, test can be done using embedded trial instruction and can be implemented by a variety of individuals (peer, paraprofessional, general education teacher, or special education teacher). The time needed to implement model, lead, test is dependent upon the skill, task, strategy to be taught.

Model, Lead, Test is a form of scaffolding that begins with teacher modeling and providing direct guidance to support student learning. As the student progresses, the teacher provides less support and helps students gain independence with the skill, stategy or task.

Can be especially helpful when teaching students academic skills with multiple steps, such as completing a science lab experiment, completing a graphic organizer, or writing a paragraph.

Steps to Using Model, Lead, Test

1. First (Model or “I do”), the teacher models the skill/task/strategy while students watch.

2. Next (Lead or “we do”), the teacher leads the students to use the skill/task/strategy simultaneously with the teacher.

3. Last (Test or “you do”), the teacher has the students complete the skill/task/strategy independently and observes to see if they responded correctly.

Guidelines for Using Model, Lead, Test

Student(s) must respond with a predetermined level of accuracy during the test phase to consider the skill mastered prior to moving on (e.g., 80% accuracy for 2 consecutive learning sessions).

If students make an error, a correction is provided in the form of modeling the correct response, then having the student correctly perform the step again.

Model, Lead, Test is not appropriate for students who are not able to observe someone perform an action and attempt to imitate that action (e.g., students without imitation skills). You can easily test this by observing the student performing a few behaviors/movements (e.g., raising their hand, clapping their hands, etc.). The point of this step is to ensure the student is physically capable of performing the behavior.

Sample Script for Model, Lead, Test (Measuring Length in Inches with Ruler)

Steps/Materials	Teacher Says/Does	Student Response	Teacher Feedback
Model			
Teacher: 1. Pencil (to measure) 2. Clearly labeled ruler	"We can use a ruler to measure the length of an item. Watch me measure the length of this pencil." Line up the ruler to the pencil and say, "First, I line up the ruler alongside the pencil, starting at zero."	Student watches.	"Good watching me."
See above.	Move your finger to the end of the pencil and point to the corresponding number on the ruler and say, "Then I move my finger to the end of the pencil."	Student watches.	"Good watching me."
See above.	"Now I read the number on the ruler that is closest to the end of the pencil. Look this pencil measures seven inches."	Student watches.	"Good watching me."
Lead			
Teacher and Student: 1. Marker (to measure) 2. Clearly labeled ruler	"Now, let's measure the marker. Let's do it together, watch me and do what I do." Line up the ruler to the marker and say "First, line up the ruler alongside the marker, starting at zero."	Student lines up the ruler alongside the marker, starting at zero.	"Good lining up the marker with the zero on your ruler."
See above.	Move your finger to the end of the marker and point to the corresponding number on the ruler and say, "Then move your finger to the end of the marker."	Student moves their finger to the end of their marker.	"Good moving your finger to the end of your marker."
See above.	"Now read the closest number on the ruler. Look this marker measures six inches. How long is your marker?"	Student correctly says/selects/indicates the length of their marker.	"Great work measuring the marker!"
Test			
Students: 1. iPad (to measure) or other object 2. Clearly labeled ruler	"Ok, now it's your turn. Measure the iPad."	Student lines up the iPad alongside the ruler, starting at zero.	"Good lining up the iPad with the zero on your ruler."
		Student makes an incorrect response or no response.	"Watch me" and model the correct response, then have the student complete it correctly (not scored).
See above.	N/A	Student moves their finger to the end of their iPad.	"Good moving your finger to the end of your iPad."

Steps/Materials	Teacher Says/Does	Student Response	Teacher Feedback
		Student makes an incorrect response or no response.	"Watch me" and model the correct response, then have the student complete it correctly (not scored).
See above.	N/A	Student correctly says/selects/indicates the length of their iPad.	"Great work measuring the iPad!"
		Student makes an incorrect response or no response.	"Watch me" and model the correct response, then have the student complete it correctly (not scored).

Using Example/Non-Example

Learning occurs in response to a variety of different cues, situations, and stimuli. Using example/non-example exemplars or models is one way to approach providing support during teaching of the concepts in a way that will promote the students ability to generalize to all of the different cues, situations, and stimuli. Example/non-example models can be easily embedded during instruction and can be implemented by a variety of individuals (peer, paraprofessional, or teacher) either as part of the main lesson or to supplement other examples to build comprehension for students with disabilities.

Teaching sufficient examples is important when teaching students to respond to all possible demonstrations of a concept.

Teaching non-examples is how you teach students when *not* to display a response within the concept, skill, or task you are trying to teach. This is important to determine whether or not they truly understand a concept.

For example: If you teach a student to identify examples of conservation when shown or read descriptions, photographs, or videos, but they also identify something as an example of conservation when shown or read descriptions, photographs, or videos of waste, then they have not mastered the concept of conservationt.

Guidelines for Using Example/Non-Example

- Examples and non-examples should be intermixed throughout the teaching process. Generally, generalization of the concept is more likely to successfully occur when more examples and non-examples are used during instruction.

- Examples should include a sufficient number of examples that encompass as many possible features of the concept so that students can generalize to other examples.

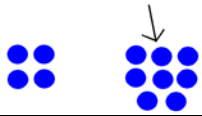
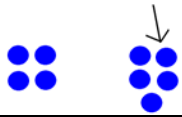
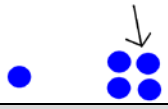
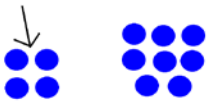
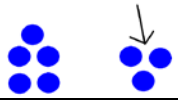
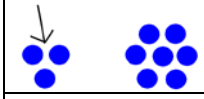
- The actual number of examples and non-examples that need to be included vary according to the skill being taught and the needs of the individual student. It is anticipated that this strategy could be embedded and add very little extra teaching time during a lesson.

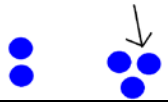
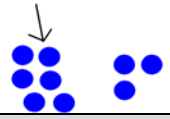
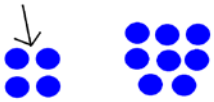
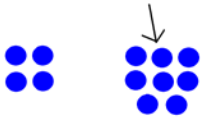
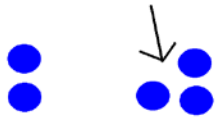
- Non-examples are not always clear enough or occur too infrequently in the natural environment for students to learn when *not* to display the behavior; therefore, explicitly teaching them can be helpful.

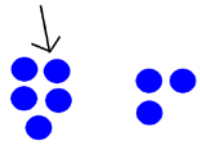
- Non-examples should be presented and taught by examining how closely they differ from the example. The most effective non-examples are close-in non-examples that have minimal differences from the actual example; this helps the student discriminate with precision.

- When teaching examples and non-examples, vary only the relevant feature during any particular session. Non-relevant features can be varied from session to session, but not within a session.

Sample Script for Using Example, Non-Example (Teaching Math Concept of Greater/Less Than)

Materials	Teacher Says/Does	Student Response	Teacher Feedback
Examples (Vary only the relevant feature)			
Picture of two different amounts. 	Point to the larger amount and say “This is greater.”	Student watches.	“Good watching.” Or no response.
Picture of two different amounts. 	Point to the larger amount and say “This is greater.”	Student watches.	“Good watching.” Or no response.
Picture of two different amounts. 	Point to the larger amount and say “This is greater.”	Student watches.	“Good watching.” Or no response.
Picture of two different amounts. 	Point to the larger amount and say “This is greater.”	Student watches.	“Good watching.” Or no response.
Interspersed Examples and Non-Examples (Randomize order of amounts each session)			
Picture of two different amounts. 	Point to the smaller amount and say “Not greater.”	Student watches.	“Good watching.” Or no response.
Picture of two different amounts. 	Point to the smaller amount and say “Not greater.”	Student watches.	“Good watching.” Or no response.
Picture of two different amounts. 	Point to the larger amount and say “Not greater.”	Student watches.	“Good watching.” Or no response.
Picture of two same amounts. 	Point to both amounts and say “Not greater.”	Student watches.	“Good watching.” Or no response.

Materials	Teacher Says/Does	Student Response	Teacher Feedback
Picture of two different amounts. 	Point to the larger amount and say “This is greater.”	Student watches.	“Good watching.” Or no response.
Picture of two same amounts. 	Point to both amounts and say “Not greater.”	Student watches.	“Good watching.” Or no response.
Picture of two different amounts. 	Point to the larger amount and say “This is greater.”	Student watches.	“Good watching.” Or no response.
Student Responses (Randomize order of amounts each session)			
Picture of two different amounts. 	Point to the smaller amount and say “Ok, now it’s your turn. Is this a greater or not greater?”	Student responds “not greater” vocally, by using symbols, or an assistive technology device.	“Good, this is not greater.”
		Student makes an incorrect response or no response.	“Not greater. Repeat after me… not greater.” Then repeat 3 oppportunities of you demonstrating greater/not greater before moving to the next session (not scored).
Picture of two different amounts. 	Point to the larger amount and say “Ok, now it’s your turn. Is this a greater or not greater?”	Student responds “greater” vocally, by using symbols, or an assistive technology device.	“Good, this is greater.”
		Student makes an incorrect response or no response.	“Greater. Repeat after me… greater.” Then repeat 3 opportunities of you demonstrating greater/not greater before moving to the next session (not scored).
Picture of two different amounts. 	Point to the larger amount and say “Ok, now it’s your turn. Is this a greater or not greater?”	Student responds “greater” vocally, by using symbols, or an assistive technology device.	“Good, this is greater.”
		Student makes an incorrect response or no response.	“Greater. Repeat after me… greater.” Then repeat 3 opportunities of you demonstrating greater/not greater before moving to the next session (not scored).

Materials	Teacher Says/Does	Student Response	Teacher Feedback
Picture of two same amounts. 	Point to one amount and say “Ok, now it’s your turn. Is this a greater or not greater?”	Student responds “not greater” vocally, by using symbols, or an assistive technology device.	“Good, this is not greater.”
		Student makes an incorrect response or no response.	“Not greater. Repeat after me… not greater.” Then repeat 3 opportunities of you demonstrating greater/not greater before moving to the next session (not scored).
Picture of two different amounts. 	Point to the larger amount and say “Ok, now it’s your turn. Is this a greater or not greater?”	Student responds “greater” vocally, by using symbols, or an assistive technology device.	“Good, this is greater.”
		Student makes an incorrect response or no response.	“Greater. Repeat after me… greater.” Then repeat 3 opportunities of you demonstrating greater/not greater before moving to the next session (not scored).

Generalization When Using Example, Non-Example

In order to promote generalization, use different objects/pictures on different days (e.g., on day two use apples, day three use cars, day four use hats, day five use star stickers). Do not vary objects within a session (e.g., if you are using apples, continue to use apples for that entire session). Use the same script as above, simply using the other objects.

Once the student masters greater than in the above format now introduce new formats. These include greater than with volume and greater than with numbers.

Once the student has an understanding of “greater than” in the above format, now introduce the symbol (>). Teach students to identify the amount that is greater and turn the opening of the symbol to the greater than amount.

Only after the student has fully mastered the concept of greater, then introduce the concept of “less than” (e.g., do not teach opposing concepts simultaneously). Use the same procedures as above (less than, not less than) to teach less than; however, if you are showing students a trial of “not less than” you should accept a response of either “not less than” or “greater.”

Sample Script for Using Example, Non-Example (Teaching Story Element: Setting)

Materials	Teacher Says/Does	Student Response	Teacher Feedback
Examples (Vary only the relevant feature)			
**Note: Student either reads an appropriate leveled text or has the appropriate leveled text read to them prior to teaching setting. For example:* It was early morning when Ben woke up. He was hungry for breakfast so we walked into the kitchen. Ben's mom was making pancakes. She put two pancakes with syrup and butter on his plate. Then she said "You better eat quickly, the bus comes at 8:00, and you don't want to miss it." Ben ate his pancakes and ran outside. He got on the bus and rode to school. He was excited when he walked into school because there was a book fair going on in the library. ***Note: If needed, students may also have response options provided. Response options should include all types of possible responses (e.g., plausible and non-plausible).*			
Picture or symbol for kitchen with the word "kitchen."	Hold up the kitchen visual. "Setting is a place that is in a story. The kitchen is a setting in our story."	Student watches.	"Good watching." Or no response.
Picture or symbol for outside with the word "outside."	Hold up the outside visual. "Outside is a setting in our story."	Student watches.	"Good watching." Or no response.
Picture or symbol for school with the word "school."	Hold up the school visual. "School is a setting in our story."	Student watches.	"Good watching." Or no response.
Picture or symbol for library with the word "library."	Hold up the library visual. "Library is a setting in our story."	Student watches.	"Good watching." Or no response.
Interspersed Examples and Non-Examples (Randomize order of pictures/symbols in each session)			
Picture or symbol for Ben with the word "Ben."	Hold up the Ben visual. "Ben is NOT a setting in our story."	Student watches.	"Good watching." Or no response.
Picture or symbol for pancakes with the word "pancakes."	Hold up the pancakes visual. "Pancakes are NOT a setting in our story."	Student watches.	"Good watching." Or no response.
Picture or symbol for outside with the word "outside."	Hold up the outside visual. "Outside is a setting in our story."	Student watches.	"Good watching." Or no response.
Picture or symbol for gym with the word "gym."	Hold up the gym visual. "Gym is NOT a setting in our story."	Student watches.	"Good watching." Or no response.
Picture or symbol for kitchen with the word "kitchen."	Hold up the kitchen visual. "The kitchen is a setting in our story."	Student watches.	"Good watching." Or no response.
Picture or symbol for mom with the word "mom."	Hold up the mom visual. "Mom is NOT a setting in our story."	Student watches.	"Good watching." Or no response.

Materials	Teacher Says/Does	Student Response	Teacher Feedback
Picture or symbol for library with the word “library.”	Hold up the library visual. “Library is a setting in our story.”	Student watches.	“Good watching.” Or no response.
Student Responses (Randomize order of pictures/symbols in each session)			
Picture or symbol for books with the word “books.”	Hold up the books visual. “Okay, now your turn. Are books a setting in our story?”	Student responds “not a setting” vocally, by using symbols, or an assistive technology device.	“Good, books are not a setting.”
		Student makes an incorrect response or no response.	“Not a setting. Books are not a place in our story. Repeat after me… not a setting.” Then repeat 3 opportunities of you demonstrating setting/not a setting before moving to the next session (not scored).
Picture or symbol for school with the word “school.”	Hold up the school visual. “Is school a setting in our story?”	Student responds “setting” vocally, by using symbols, or an assistive technology device.	“Good, the school is a setting.”
		Student makes an incorrect response or no response.	“Setting. The school is a place in our story. Repeat after me… setting.” Then repeat 3 opportunities of you demonstrating setting/not setting before moving to the next session (not scored).
Picture or symbol for kitchen with the word “kitchen.”	Hold up the kitchen visual. “Is kitchen a setting in our story?”	Student responds “setting” vocally, by using symbols, or an assistive technology device.	“Good, the kitchen is a setting.”
		Student makes an incorrect response or no response.	“Setting. The kitchen is a place in our story. Repeat after me… setting.” Then repeat 3 opportunities of you demonstrating setting/not setting before moving to the next session (not scored).
Picture or symbol for park with the word “park.”	Hold up the park visual. “Is park a setting in our story?”	Student responds “not a setting” vocally, by using symbols, or an assistive technology device.	“Good, the park is not a setting.”

Materials	Teacher Says/Does	Student Response	Teacher Feedback
		Student makes an incorrect response or no response.	"Not a setting. The park is not a place in our story. Repeat after me… not a setting." Then repeat 3 opportunities of you demonstrating setting/not a setting before moving to the next session (not scored).
Picture or symbol for library with the word "library."	Hold up the library visual. "Is library a setting in our story?"	Student responds "setting" vocally, by using symbols, or an assistive technology device.	"Good, the library is a setting."
		Student makes an incorrect response or no response.	"Setting. The library is a place in the story. Repeat after me… setting." Then repeat 3 opportunities of you demonstrating setting/not setting before moving to the next session (not scored).

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