National Center and State Collaborative

NCSC Instructional Resource Guide

The National Center and State Collaborative (NCSC) is applying the lessons learned from the past decade of research on alternate assessments based on alternate achievement standards (AA-AAS) to develop a multi-state comprehensive assessment system for students with significant cognitive disabilities. The project draws on a strong research base to develop an AA-AAS that is built from the ground up on powerful validity arguments linked to clear learning outcomes and defensible assessment results, to complement the work of the Race to the Top Common State Assessment Program (RTTA) consortia.

Our long-term goal is to ensure that students with significant cognitive disabilities achieve increasingly higher academic outcomes and leave high school ready for post-secondary options. A well-designed summative assessment alone is insufficient to achieve that goal. Thus, NCSC is developing a full system intended to support educators, which includes formative assessment tools and strategies, professional development on appropriate interim uses of data for progress monitoring, and management systems to ease the burdens of administration and documentation. All partners share a commitment to the research-to-practice focus of the project and the development of a comprehensive model of curriculum, instruction, assessment, and supportive professional development. These supports will improve the alignment of the entire system and strengthen the validity of inferences of the system of assessments.

This document is available in alternative formats upon request.

National Center and State Collaborative

NCSC is a collaborative of 18 states and five organizations.

The states include: Alaska, Arizona, Connecticut, District of Columbia, Florida, Georgia, Indiana, Louisiana, Massachusetts, Nevada, New York, North Dakota, Pacific Assessment Consortium (PAC-6)[1], Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, and Wyoming.

Tier II states are partners in curriculum, instruction, and professional development implementation but are not part of the assessment development work. They are: Arkansas, California, Delaware, Idaho, Maine, Maryland, New Mexico, Oregon, and U.S. Virgin Islands.

- District of Columbia
- Pacific Assessment Consortium (PAC-6)
- U.S. Virgin Islands
- Tier II States

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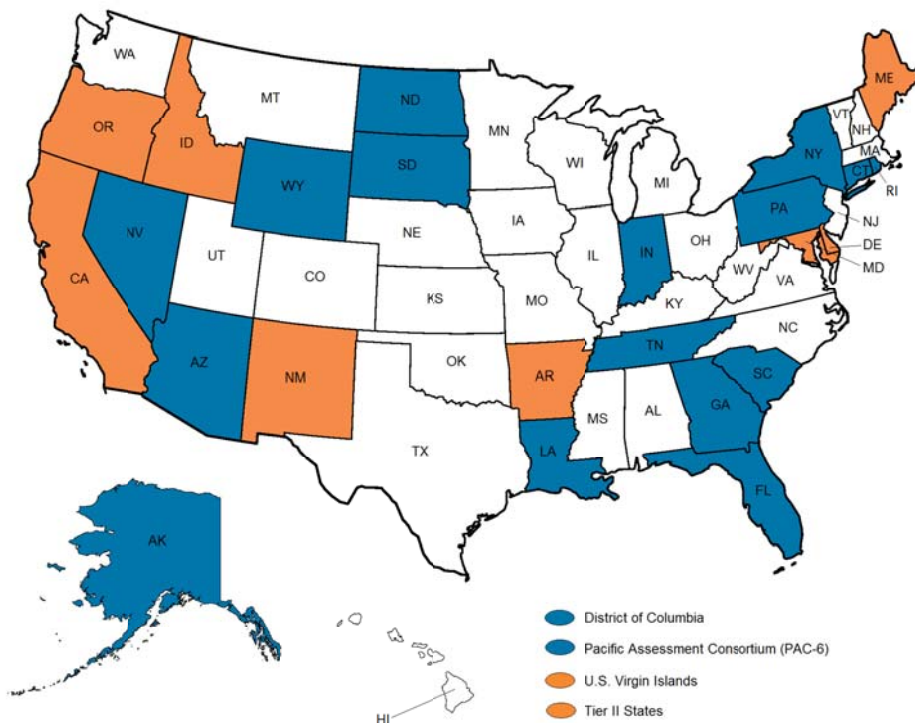
[1] The Pacific Assessment Consortium (including the entities of American Samoa, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam, Republic of Palau, and Republic of the Marshall Islands) partner with NCSC as one state, led by the University of Guam Center for Excellence in Developmental Disabilities Education, Research, and Service (CEDDERS).

National Center and State Collaborative

The five partner organizations include: The National Center on Educational Outcomes (NCEO) at the University of Minnesota, The National Center for the Improvement of Educational Assessment (Center for Assessment), The University of North Carolina at Charlotte, The University of Kentucky, and edCount, LLC.

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Table of Contents

Instructional Resource Guide on Prompting and Instructional Strategies

The purpose of the Instructional Resource Guide:
• To provide guidance for teachers regarding evidence-based prompting and instructional strategies to be used to teach students with significant disabilities • To serve as a companion document to the MASSIs (Math Activities with Scripted Systematic Instruction) and LASSIs (Language Arts Scripted Systematic Instruction) • To help educators build knowledge of the essential systematic instructional methods and prompting strategies that are used in the MASSIs and LASSIs to teach students targeted skills

Systematic Instruction

Teaching focused on specific, measurable responses that may either be discrete or a chained task, and that are established through the use of defined methods of prompting and feedback based on the principles and research of ABA.

Will include:

- Prompting

- Feedback

- Format of instruction

- Task Analysis

- Repeated Trial

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 strategies were not included because they are not used in the MASSIs or LASSIs. These include, but are not limited to most to least prompting, simultaneous prompting, and graduated guidance.

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.

Constant Time Delay (CTD)

CTD is a form of errorless learning that can be used with discrete responses (e.g., number ID; vocabulary words, matching). 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.

First, use a zero delay round to introduce the skill. Give the cue to respond and 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 trials (or sessions), wait a few seconds before giving the prompt to allow the student to anticipate the correct answer.

Zero Delay Round

Provide the task direction and immediately give the controlling prompt to teach the child the correct response. Reinforce the child's correct response.

For example (number identification):

1. Teacher says "Find three" while pointing to the number 3.

2. Student responds by pointing to the number 3.

3. Teacher reinforces the correct response by saying, "Good, that is three," and records the data (prompted correct).

Time Delay Round

After several trials/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 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 is used. After the student gives the correct response offer praise. Record Data (prompted correct: P).

If an incorrect response is given, provide error correction procedures (usually the controlling prompt to prompt a correct response) and remind the student to wait if not sure.

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

For example:

1. Teacher says "Find three" and waits 4 seconds (allowing the student to have a chance to answer).

2. IF the student independently points to 3, reinforce the correct response by saying "Good, that is three" and record the data (independent correct: "+").

3. IF the student waits and does nothing, after 4 seconds the teacher points to the 3. After the student points to the 3, 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: "-").
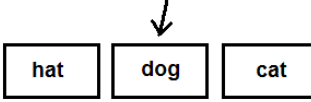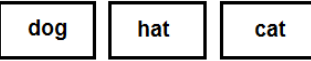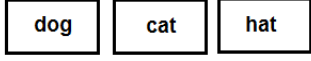
⏰Sample Script for CTD (Teaching Expressive Symbol Identification)

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."
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."
		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 blank card or a card with a picture of an unrelated item), but eventually should be similar items, such as cards other targeted symbols (e.g., cat, dog, or hat). **Note: Shuffle cards and distracters between every trial.*			
Card with the word cat on it and two distracters: ↓ [cat] [dog] [hat]	Point to word cat and say "Touch cat."	Student touches word cat.	"Good, that says cat."
Card with the word dog on it and two distracters: ↓ [hat] [dog] [cat]	Point to word dog and say "Touch dog."	Student touches the word dog.	"Good, that says dog."
Card with the word hat on it and two distracters: ↓ [hat] [dog] [cat]	Point to word hat and say "Touch hat."	Student touches the word hat.	"Good, that says hat."
4 Second Delay Round			
Card with the word cat on it and two distracters: [dog] [hat] [cat]	"Touch cat." Wait 4 seconds.	Student touches cat before additional prompting.	"Good! You got it! That says cat."
		Student responds incorrectly before additional prompting.	Point to the word cat. Say: "This is cat. 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 cat. Say: "This is cat." After they point say "Good."
Card with the word dog on it and two distracters: [dog] [cat] [hat]	"Touch dog." Wait 4 seconds.	Student touches dog before additional prompting.	"Good! You got it! That says dog."
		Student responds incorrectly before additional prompting.	Point to the word dog. Say: "This is dog. 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 dog. Say: "This is dog." After they point say "Good."
Card with the word hat on it and two distracters:	"Touch hat." Wait 4 seconds.	Student touches hat before additional	"Good! You got it! That says hat."

Materials	Teacher Says/Does	Student Response	Teacher Feedback
cat hat dog		prompting.	
		Student responds incorrectly before additional prompting.	Point to the word hat. Say: "This is hat. 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 hat. Say: "This is hat." 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.

More potent reinforcement for independent responses only 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 response requires matching?

Give the student the card to be matched. When prompting, point to the correct answer on the array. The student places the card to indicate the match.

What if the student responds by eye gazing?

The prompt can still be pointing to the correct option. If this is not salient enough, leave your finger on the correct answer until the student selects it.

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.

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

Can be used with a task analysis or a chain of behaviors (e.g., entering a multistep equation into a calculator) or a discrete task (e.g., identifying numbers).

A hierarchy of prompts (with a time delay between each prompt) is used on each step of the task analysis (e.g., verbal, gesture/model, physical) 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). Remember these prompts can be adapted for students with a range of sensory impairments.

   Examples:

   - Students with visual impairments: partial verbal, full verbal, physical

   - Students with hearing impairments: sign/gesture, model, physical

2. Provide the task direction/natural cue (e.g., "Use your calculator to solve the equation 8 x 12 = ?")

3. Always give the student an opportunity to make the correct response before providing any prompting on each step of the task analysis.

4. Use the least intrusive prompt first and progress to more intrusive prompts until the learner responds correctly (usually 3 to 5 second delay between prompts).

5. If the student makes an error, immediately provide the most intrusive prompt to ensure makes a correct response.

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

Examples of Prompting Hierarchies

Pyramid 1 (top to bottom):
Natural Cue
Verbal Prompt
Model (Show them)
Physical Prompt

Pyramid 2 (top to bottom):
Natural Cue
Gesture Prompt
Light Physical Prompt
Full Physical Prompt

Prompting Hierarchy

MOST TO LEAST

LEAST TO MOST

Natural Cue
Gesture
Verbal
Visual/Picture
Model
Physical (partial, full)
Full Physical
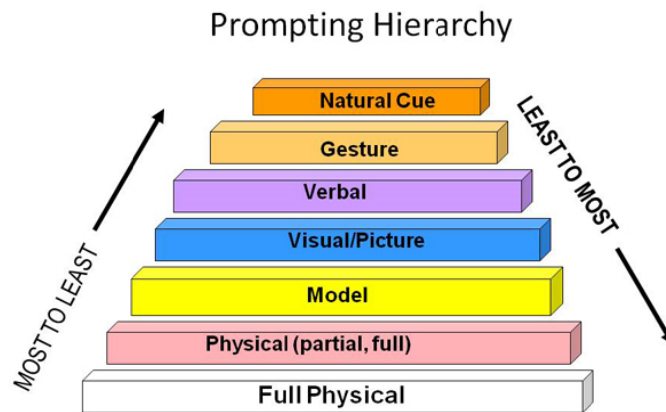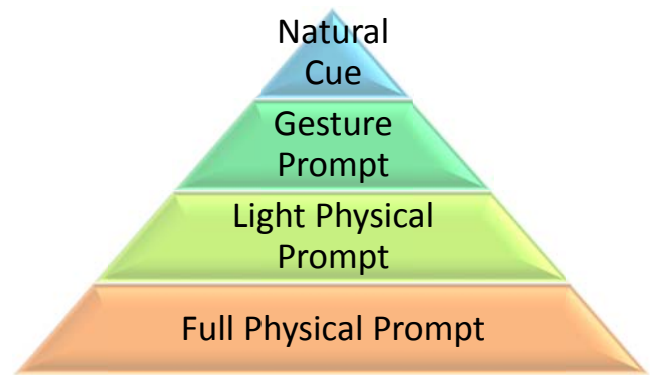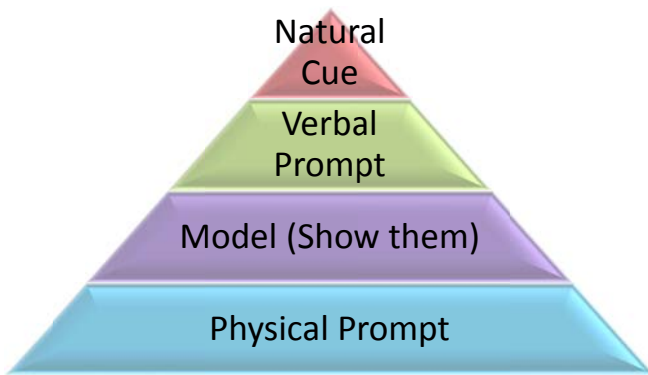
Sample Script for System of Least Prompts (Calculator Use)

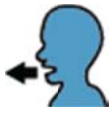| Steps/Materials	Teacher Says/Does	Student Response	Teacher Feedback
Note: In this example, if the student presses the wrong button, the teacher will have to clear the calculator and re-enter the equation up to the step the student was working on when the error occurred.			
1. Student has worksheet 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 makes an error.	Provide an immediate physical prompt (take their hand and help them press 8 in the calculator).
		Student does not respond.	Wait 3-5 seconds. Provide a verbal prompt "Push 8."
		No response after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the 8 on the calculator).
		No response 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 makes an error.	Provide an immediate physical prompt (take their hand and help them press x in the calculator).
		Student does not respond.	Wait 3-5 seconds. Provide a verbal prompt "Push the x."
		No response after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the x on calculator).
		No response 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 makes an error.	Provide an immediate physical prompt (take their hand and help them press 12 in the calculator).
		Student does not respond.	Wait 3-5 seconds. Provide a verbal prompt "Push 12."
		No response after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the 12 on the calculator).
		No response 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	Correct: Student enters = into calculator.	Or wait for them to initiate the next step (5).

Steps/Materials	Teacher Says/Does	Student Response	Teacher Feedback
	automatically after completing the previous step). Teacher can say "What's next?" or "Keep going."	Student makes an error.	Provide an immediate physical prompt (take their hand and help them press = in the calculator).
		Student does not respond.	Wait 3-5 seconds. Provide a verbal prompt "Push =."
		No response after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the = on the calculator).
		No response 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 makes an error.	Provide an immediate physical prompt (take their hand and help them write/stamp/say/select 96).
		Student does not respond.	Wait 3-5 seconds. Provide a verbal prompt "Look at the calculator."
		No response after being given a verbal prompt.	Wait 3-5 seconds. Provide a gesture prompt (point to the 96 on the calculator).
		No response 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 (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 in his racecar bed. 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."			
**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 makes an error.	Provide an immediate verbal model "Pancakes." Have student repeat the model.
		Student does not respond.	No response after sentence is reread. 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 after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response 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 in a race car bed?"	Correct: Student responds "Ben."	"Good. Ben woke up in a race car bed!"
		Student makes an error.	Provide an immediate verbal model "Ben." Have student repeat the model.
		Student does not respond.	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 after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response after sentence is reread.	Wait 3-5 seconds. Provide a verbal model "Ben." Have student repeat the model.
Student has entire text with adaptations	Teacher asks where question: "Where	Correct: Student responds "kitchen."	"Good. Mom was in the kitchen!"

Materials	Teacher Says/Does	Student Response	Teacher Feedback
if needed (e.g., Braille, picture symbols, objects, etc.).	was Mom?"	Student makes an error.	Provide an immediate verbal model "Kitchen." Have student repeat the model.
		Student does not respond. 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.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response 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 makes an error.	Provide an immediate verbal model "Making pancakes." Have student repeat the model.
		Student does not respond.	No response after sentence is reread. 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 after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response 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 makes an error.	Provide an immediate verbal model "8:00." Have student repeat the model.
		Student does not respond.	No response after sentence is reread. 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 after rereading the text.	Wait 3-5 seconds. Reread only the sentence with the answer in it.
		No response after sentence is reread.	Wait 3-5 seconds. Provide a verbal model "8:00." Have student repeat the model.

Model, Lead, Test

Model, lead, test is also known as "I do," "we do," "you do."

It is a form of scaffolding that begins with teacher modeling and guidance to support student learning.

As the student progresses, the teacher should provide less support and helps students gain independence with the skill or task.

Can be especially helpful when teaching students academic skills with multiple steps, such as using the Pythagorean Theorem or completing a graphic organizer.

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. For example, 80% accuracy for 2 consecutive 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.

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, and folding their hands). The point of this step is to ensure the student is physically capable of performing the behavior.

Then, secure the student's attention and say "do this" while completing the action (e.g., clap your hands). Do NOT say "clap your hands."

If the student attempts to imitate the action (e.g., claps their hands) then model, lead, test may be an appropriate teaching strategy for that student.

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. Spoon (to measure) or other object 2. Clearly labeled ruler	"Ok, now it's your turn. Measure the spoon."	Student lines up the spoon alongside the ruler, starting at zero.	"Good lining up the spoon 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 spoon.	"Good moving your finger to the end of your spoon."

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 spoon.	"Great work measuring the spoon!"
		Student makes an incorrect response or no response.	"Watch me" and model the correct response, then have the student complete it correctly (not scored).

Example/Non-Example Training

Most behaviors need to be performed in response to a variety of different cues, situations, and stimuli. Using example/non-example training is one way to approach teaching students the concepts in a way that will generalize to all of the different cues, situations, and stimuli where they might need it.

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 the target behavior you are trying to teach. This is important to determine whether or not they truly understand a concept.
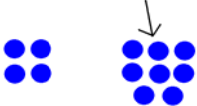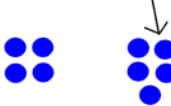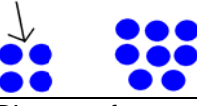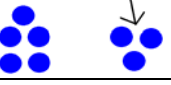
For example: If you teach a student to respond "three" when shown the written number 3, but they also say "three" when shown the numbers 1-9, then they have not mastered the concept of 3.
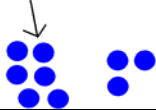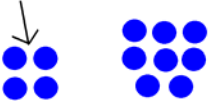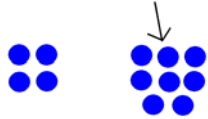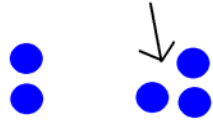
Guidelines for Using Example/Non-Example Training
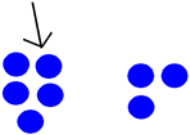
- Examples and non-examples should be intermixed throughout the teaching process.

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

- Generally, generalization of the concept is more likely to successfully occur when more examples and non-examples are used during instruction.

- 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.

- 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 Example, Non-Example Training (Teaching Concept of <)

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 trials)			
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 trials)			
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 trials of you demonstrating greater/not greater before moving to the next trial (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 trials of you demonstrating greater/not greater before moving to the next trial (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 trials of you demonstrating greater/not greater before moving to the next trial (not scored).
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."

| Materials	Teacher Says/Does	Student Response	Teacher Feedback
		Student makes an incorrect response or no response.	"Not greater. Repeat after me… not greater." Then repeat 3 trials of you demonstrating greater/not greater before moving to the next trial (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 trials of you demonstrating greater/not greater before moving to the next trial (not scored).

Generalization When Using Example, Non-Example Training

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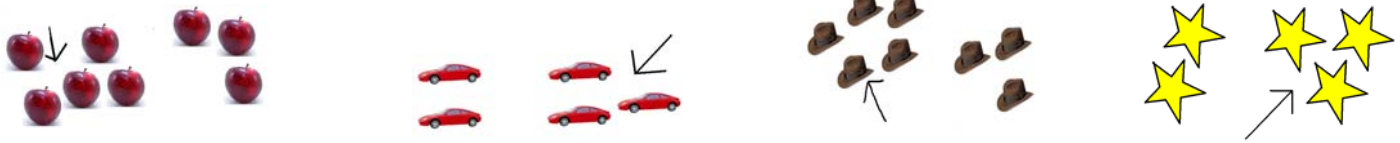
Once the student masters greater than in the above format now introduce new formats. These include greater than with volume and greater than with numbers.

5   6   9   2
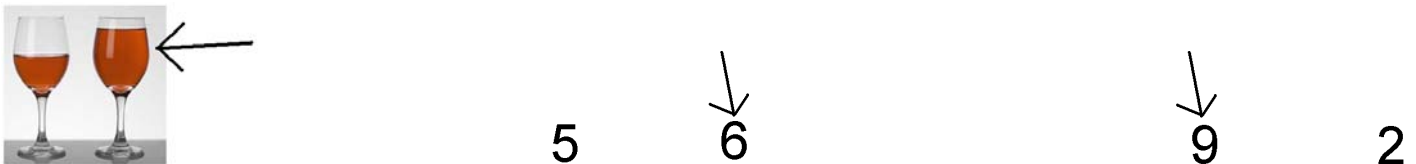
Once the student masters greater than in the above format, now introduce the symbol (>). Teach students to identify the amount that is greater and turn the opening of the symbol to the greater than amount.

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 Example, Non-Example Training (Teaching 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 in his racecar bed. 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 about 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 trials)			
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 trials)			
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 trials of you demonstrating setting/not a setting before moving to the next trial (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 trials of you demonstrating setting/not setting before moving to the next trial (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 trials of you demonstrating setting/not setting before moving to the next trial (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."
		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 trials of you demonstrating setting/not a setting before moving to the next trial (not scored).

Materials	Teacher Says/Does	Student Response	Teacher Feedback
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 trials of you demonstrating setting/not setting before moving to the next trial (not scored).

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