

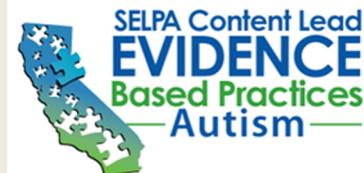
# Evidence Based Practice Training:

## Antecedent Based Interventions (ABI)

Adapted from Sam, A., & AFIRM Team. (2015). *Antecedent Based Intervention*. Chapel Hill, NC: National Professional Development Center on Autism Spectrum Disorder, FPG Child Development Center, University of North Carolina.  
Retrieved from <https://afirm.fpg.unc.edu/antecedent-based-intervention>



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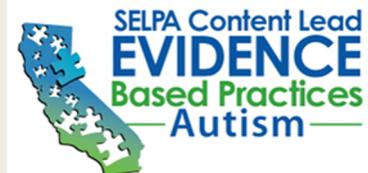


# What is CAPTAIN

The California Autism Professional Training And Information Network (CAPTAIN) is an interagency network developed to support the understanding and use of evidence based practices (EBPs) for individuals affected by Autism Spectrum Disorders (ASD) across the state of California.



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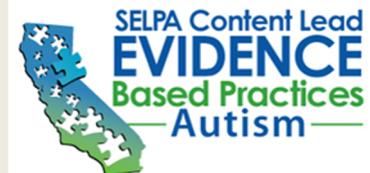
# What is CAPTAIN

Marin County SELPA in partnership with CAPTAIN, are members of the Statewide System of Support as the SELPA Content Lead for ASD.

This project is funded by the California Department of Education and the California Collaborative for Educational Excellence.



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# Levels of Professional Development to Reach Implementation



This is a Workshop/Training and is designed to increase your KNOWLEDGE of the topic. Implementation supports to assist you with use of this EBP will be outlined following the TRAINING/WORKSHOP

# Before We Begin...

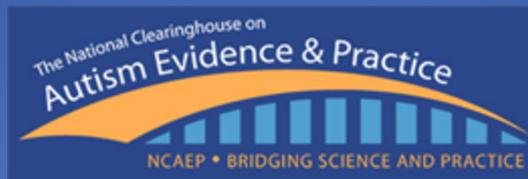
- Please complete the Pre Training Assessment:

*\*Trainer must enter their Regional specific link to Pre-Training Assessment\**

# Learning Objectives

- Describe what EBPs are
- Identify the goals of using ABI
- Identify antecedents that may be triggering interfering behaviors
- Identify common prevention techniques (ABIs) that can be used based on triggers and probable functions of interfering behavior

# What are Evidence Based Practices?



NCAEP definition of an EBP:

“Focused intervention practices that have evidence of efficacy in promoting positive outcomes for learners with ASD.”

Steinbrenner, J. R., Hume, K., Odom, S. L., Morin, K. L., Nowell, S. W., Tomaszewski, B., Szendrey, S., McIntyre, N. S., Yücesoy-Özkan, S., & Savage, M. N. (2020). Evidence-based practices for children, youth, and young adults with Autism. The University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Institute, National Clearinghouse on Autism Evidence and Practice Review Team.



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# Antecedent Based Interventions (ABI)

“ABI are a collection of strategies in which environmental modifications are used to change the conditions in the setting that prompt a learner with ASD to engage in an interfering behavior.” (NPDC-ASD, 2010)

Name of EBP		Antecedent-Based Intervention (ABI)					
Definition of EBP		<p>Antecedent-based interventions (ABI) include a variety of modifications that are made to the environment/context in an attempt to change or shape a learner's behavior. ABIs are typically implemented after conducting a functional behavior assessment which can assist in identifying the function of an interfering behavior as well as the environmental conditions that may have become linked to a behavior over time. Once factors in the environment that may be reinforcing interfering behavior have been identified, ABIs are implemented to modify the environment or activity so that the factor no longer elicits the interfering behavior. In addition to targeting challenging behaviors, ABI can also be used to increase the occurrence of desired behaviors or skills. Common ABI procedures include: 1) modifying educational activities, materials, or schedules, 2) incorporating learner choice into learner activities/materials, 3) preparing learners ahead of time for upcoming activities, 4) varying the format, level of difficulty, or order of instruction during educational activities, 5) enriching the environment to provide additional cues or access to additional materials, and 6) modifying prompting and reinforcement schedules and delivery. ABI strategies often are used in conjunction with other evidence-based practices such as functional communication training, extinction, and reinforcement.</p>					
Outcome Areas		Age Ranges					
		0-2 Toddlers	3-5 Preschoolers	6-11 Elementary School	12-14 Middle School	15-18 High School	19-22 Young Adults
	Communication	✓	✓	✓	✓	✓	
	Social		✓	✓	✓		✓
	Joint attention						
	Play	✓	✓	✓			
	Cognitive						
	School readiness		✓	✓	✓		
	Academic/ Pre-academic		✓	✓		✓	
	Adaptive/ self-help	✓	✓	✓	✓	✓	
	Challenging/ Interfering behavior	✓	✓	✓	✓	✓	✓
	Vocational						
	Motor						
	Mental health			✓	✓	✓	
	Self-determination						

(Steinbrenner, 2020)

# ABI is Used With Other EBPs

## Functional Behavior Assessment (FBA)

### And Often:

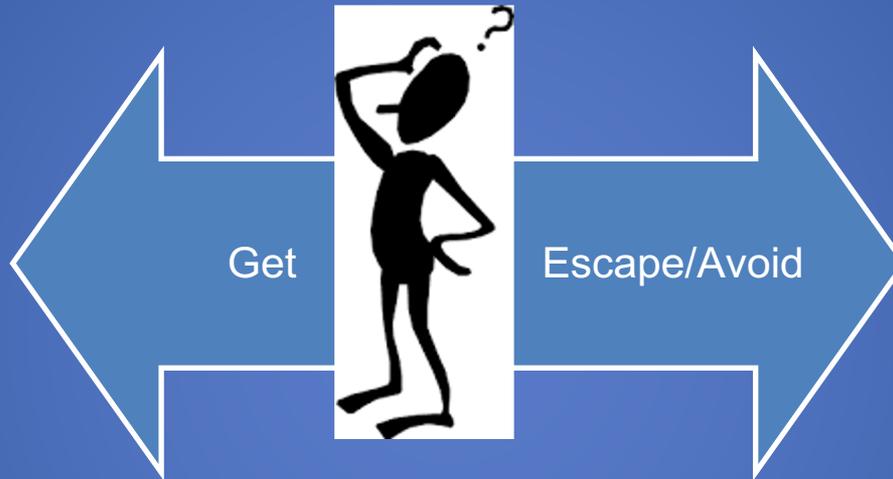
- Functional Communication Training (FCT)
- Extinction (EXT)
- Reinforcement (R+)
- Visual Supports (VS)

# A Functional Behavior Assessment Is Always Used to Inform ABI



# Functions of Behavior = Why It Occurs

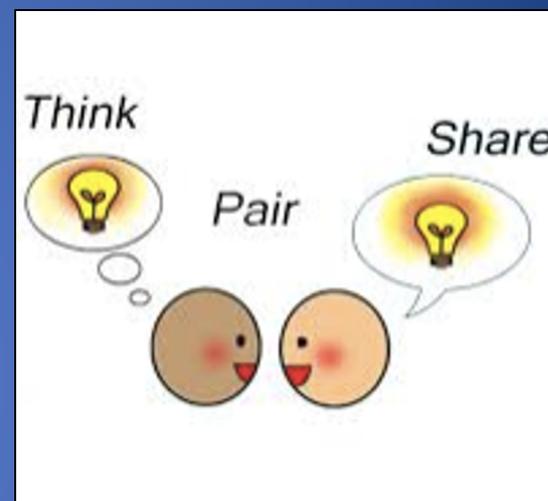
- Items
- Attention or interactions
- Activities
- Sensory input or stimulation



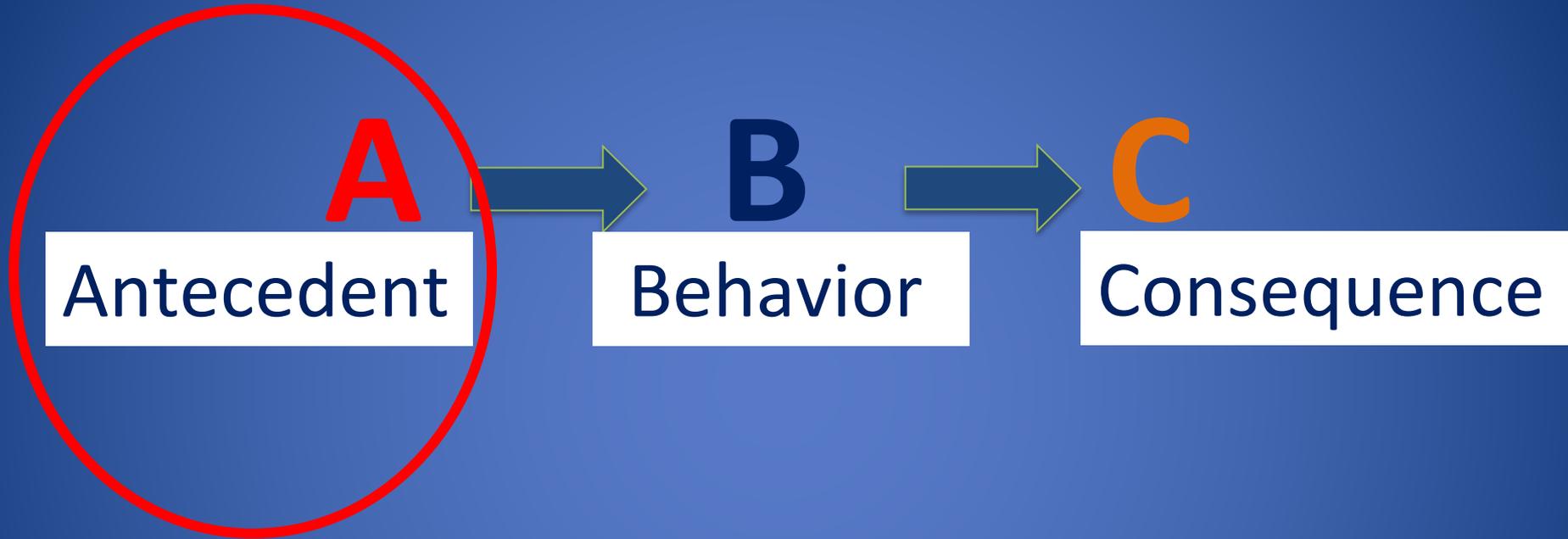
- Items
- Attention or interactions
- Activities
- Sensory input or stimulation

# ABCs of Our Behavior....

- Scenerio One: Late for work
- Scenerio Two: Leisurely Sunday Drive



# ABI = Rearranging the Antecedents to Prevent the Need for the Behavior



# Collect ABC Data



**AFIRM**  
Autism Focused Intervention  
Resources & Modules

Antecedent-based  
Intervention

**---A-B-C Data Chart---**

Learner's Name: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Observer(s): \_\_\_\_\_  
 Interfering Behavior: \_\_\_\_\_  
 \_\_\_\_\_

**A-B-C Data Chart:**  
In the table below, record your observations

	Antecedent	Behavior	Consequence
Date: Time:			

# Selecting ABI Strategies

- Choose ABI strategies based on the triggering events (avoid or alter them) and the primary function of the interfering behavior
- Teach and reinforce an alternative (or absence of) the interfering behavior
- Strategies selected should prevent the need to engage in the interfering behavior

Antecedent-based  
intervention



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Action Focused Intervention  
Research & Models

**ABI Planning Worksheet**

Learner's Name: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Team Members: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Identify features of the behavior:**

Where does the behavior occur? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

With whom does the behavior occur? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

When does the behavior occur? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

During what activities does the behavior occur? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Identify features of the environment:**

What are other peers/students doing when the behavior occurs? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

What is the proximity of other students, teachers, and/or adults when the behavior occurs? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Number of individuals in the area: \_\_\_\_\_  
 Other environmental conditions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

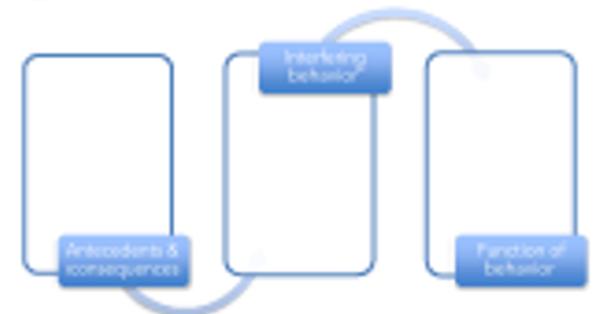
Antecedent-based Intervention National Professional Development Center on ASD 2018 1 of 16

Antecedent-based  
intervention

Determine the function of the behavior:

<p><b>To get or obtain:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Attention</li> <li><input type="checkbox"/> Food</li> <li><input type="checkbox"/> Toys</li> <li><input type="checkbox"/> Hugs</li> <li><input type="checkbox"/> Sensory Stimulation</li> <li><input type="checkbox"/> Other: _____</li> </ul>	<p><b>To escape or avoid:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Attention</li> <li><input type="checkbox"/> Difficult task/activity</li> <li><input type="checkbox"/> Undesirable activity</li> <li><input type="checkbox"/> Sensory stimulation</li> <li><input type="checkbox"/> Social stimulation</li> <li><input type="checkbox"/> Other: _____</li> </ul>
--	---

Develop a hypothesis statement:



```

graph LR
    A[Antecedents & consequences] --> B[Interfering behavior]
    B --> C[Function of behavior]
  
```

Hypothesis statement: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Determine overall goal for ABI: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

For more information visit:  
[www.afirm.tjg.usc.edu](http://www.afirm.tjg.usc.edu)

Antecedent-based Intervention National Professional Development Center on ASD 2018 2 of 16

# Common ABI Strategies Include:

- Using learner preferences
- Changing schedules/routines
- Implementing pre-activity interventions
- Infusing choice making
- Altering how instruction is delivered (input and output)
- Enriching the environment with sensory stimuli

# ABI Strategies Based on Perceived Function(s)

## Escape

Time Warning  
Visual Schedule  
Incorporate choice and preferences

## Attention

Environmental Enrichment  
Reinforce A Replacement  
Visual Supports

## Tangible

Offer Choices  
Visual Supports/Reinforcement Systems  
Reinforce A Replacement  
Changing Routines

## Sensory

Environmental Enrichment  
Visual Supports  
Reinforce A Replacement  
Reinforcement for absence of behavior

Strategy

Function of Behavior

Examples

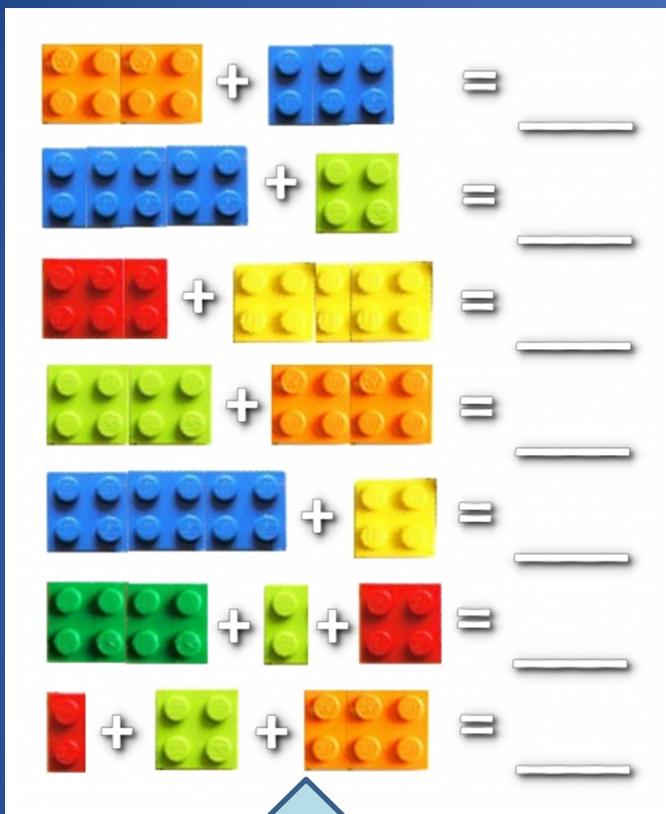
## USING LEARNER PREFERENCE

Tasks/activities are modified and adapted to increase learner's interest.

- Escape/avoid

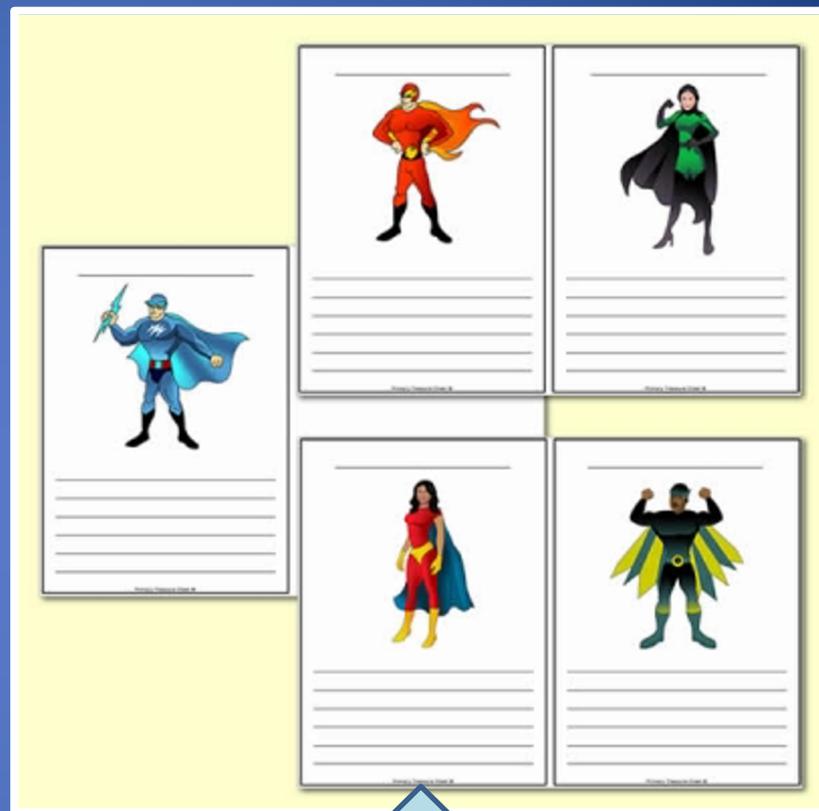
- Use monster trucks in math problems
- Use a Batman pencil for writing activities.

# Use Learner Preferences Within Activities



A series of seven addition problems using colorful Lego bricks. Each problem consists of two groups of bricks followed by a plus sign, an equals sign, and a blank line for the answer. The problems are: 1. 2 orange bricks + 2 blue bricks = \_\_\_\_\_; 2. 4 blue bricks + 2 green bricks = \_\_\_\_\_; 3. 2 red bricks + 4 yellow bricks = \_\_\_\_\_; 4. 2 green bricks + 4 orange bricks = \_\_\_\_\_; 5. 4 blue bricks + 2 yellow bricks = \_\_\_\_\_; 6. 3 green bricks + 1 green brick + 1 red brick = \_\_\_\_\_; 7. 1 red brick + 2 green bricks + 3 orange bricks = \_\_\_\_\_.

Lego Math



A 2x2 grid of writing cards on a yellow background. Each card features a different superhero character at the top and several horizontal lines for writing below. The characters are: top-left (blue superhero with a sword), top-right (green superhero with a black cape), bottom-left (red and blue superhero), and bottom-right (black superhero with yellow wings).

Super Hero Writing

Strategy

Function

Examples

## CHANGING SCHEDULES/ROUTINES

Routines/schedules are changed to decrease interfering behaviors.

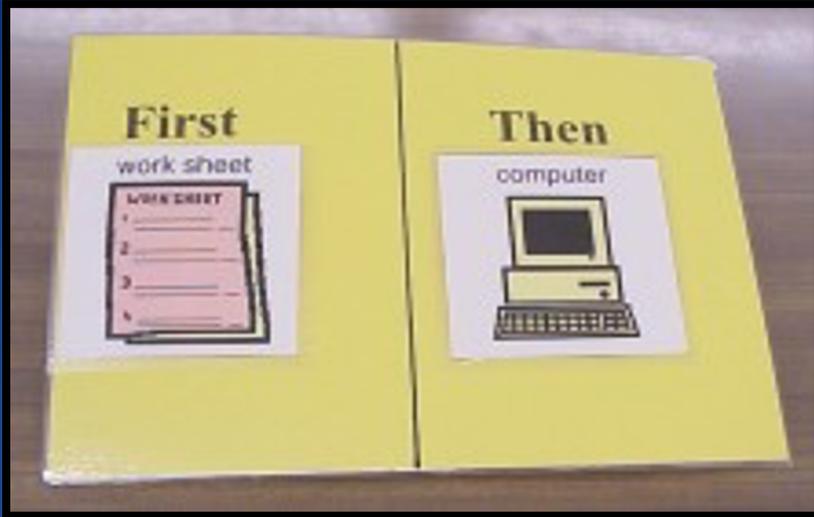
- Escape/avoid

- Changing hand washing routine.
- Going outside (preferred activity) after completing work assignment (non-preferred activity).
- Using a visual timer to show how long learner must remain seated.
- Clearly labeling parts of the classroom.

# Change Hand Washing Routine.....



# First - Then Visual Schedule System



# Timers and Alarms:



# Structure in the Environment



Three areas are clearly defined with barriers, signs and specific materials to clarify expectations

Strategy

Function

Examples

## IMPLEMENTING PRE- ACTIVITY INTERVENTIONS

Implemented before a task/activity associated with the interfering behavior.

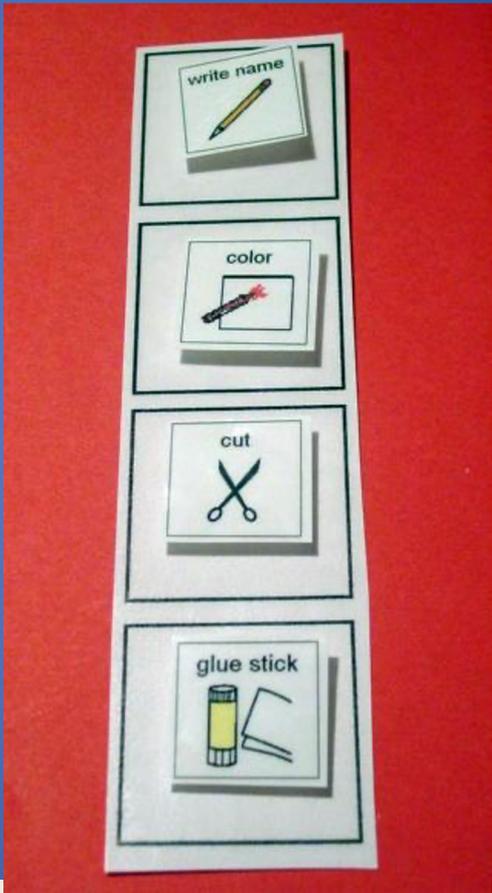
- Escape/avoid

- Reviewing assignment components before receiving assignment
- Using visual activity schedules
- Providing a warning before time to switch centers or activities

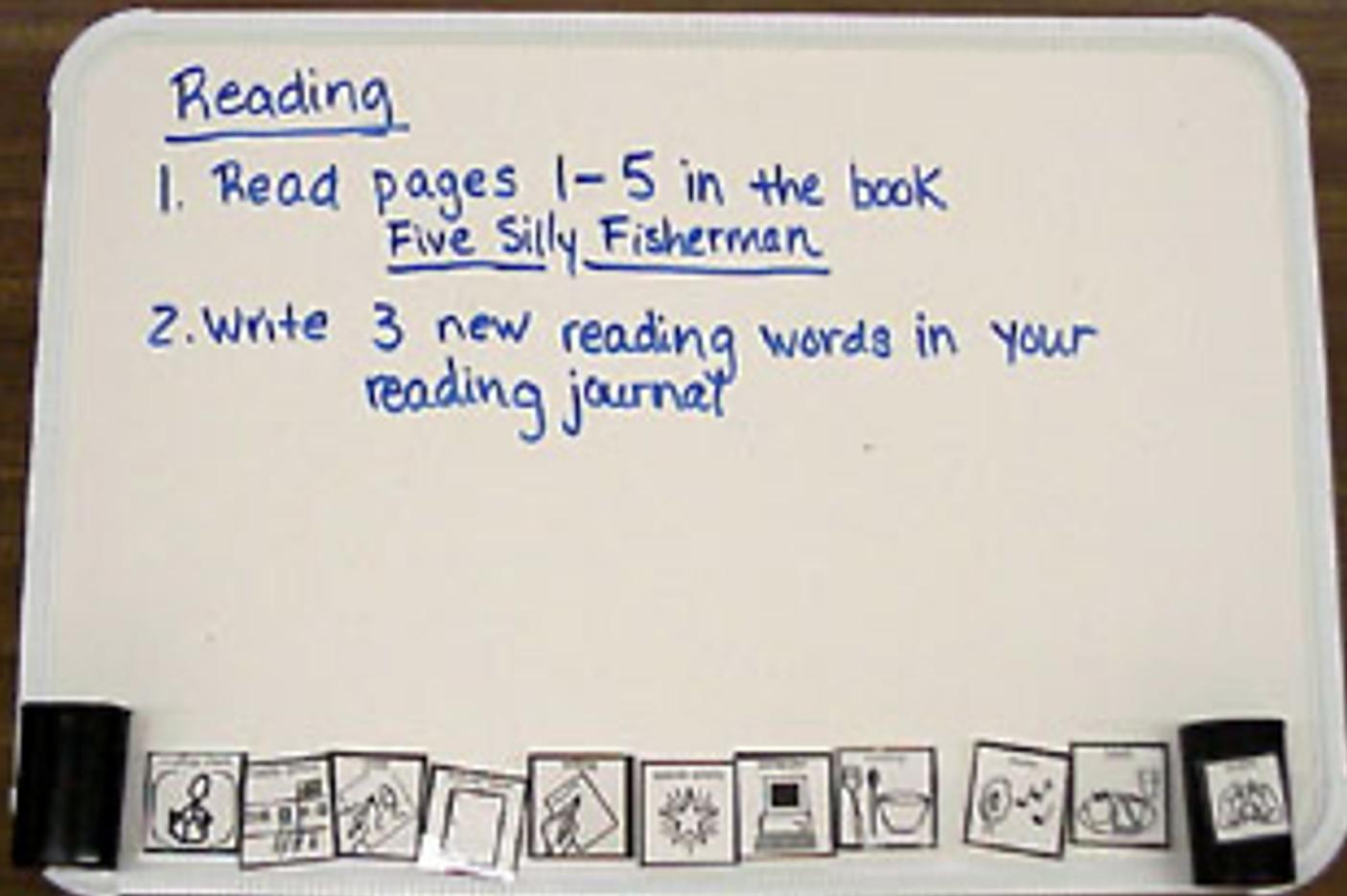
# Visual Step By Step Instructions



# Visual sequence and organization of steps within an activity



# Icon Schedule with Mini-Schedule



CA

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ABTA 2014



Content Lead  
**E**NCE  
Based Practices  
Autism

Strategy

Function

Examples

## USING CHOICE- MAKING

During activities or settings where interfering behavior occurs, learner is presented choice of materials or tasks

- Escape/avoid

- Choosing where to sit at circle time
- Choosing who to work with in a group
- Choosing which assignment to complete first



Choices....Choices....



# Let's watch an example of giving choices



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Autism Focused Intervention  
Resources and Modules

Strategy

Function

Examples

**ALTERING HOW  
INSTRUCTION IS  
DELIVERED**

Modify instruction in order for learner to understand expectations.

- Escape/avoid

- Provide written instructions rather than verbal instructions
- Read text passage rather than requiring learner to read silently

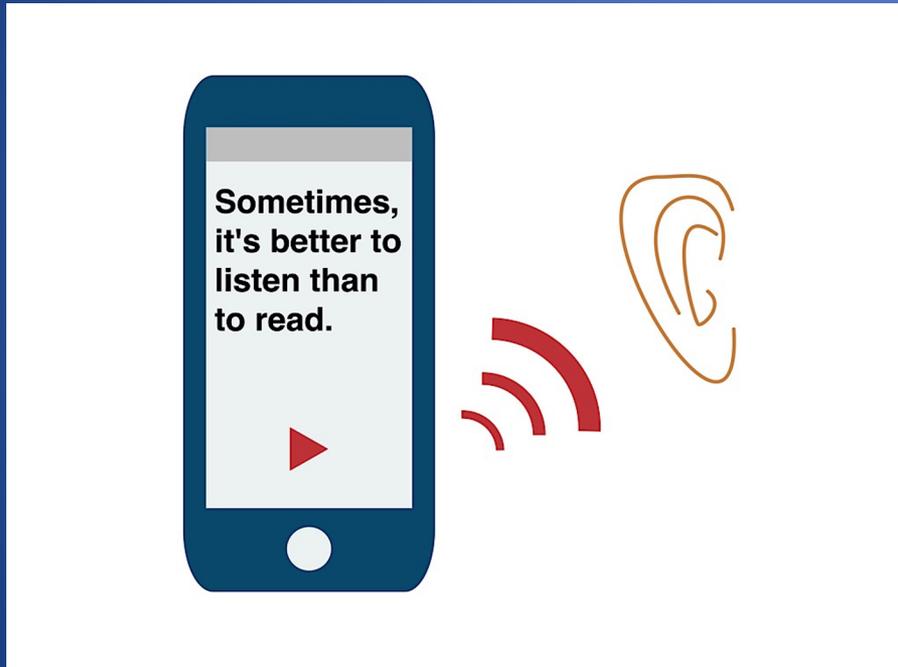
# Use Visual Structure to Clarify Expectations



# Provide Visual Instructions and Checklists

<input checked="" type="checkbox"/>	<b>Researching State of New York</b>
	<b>Identify Sub-Topics</b>
	<b>Go to library</b>
	<b>Find 2-3 Books w/subtopic info</b>
	<b>Photocopy pages w/subtopic info</b>
	<b>Go Online</b>
	<b>Download 2-3 articles on each topic</b>
	<b>Highlight important info from articles and photocopied chapters</b>
<b>Reviewed By:</b>	

# Provide Options for “Input and Output”



# Example of Allowing Alternative “Output”

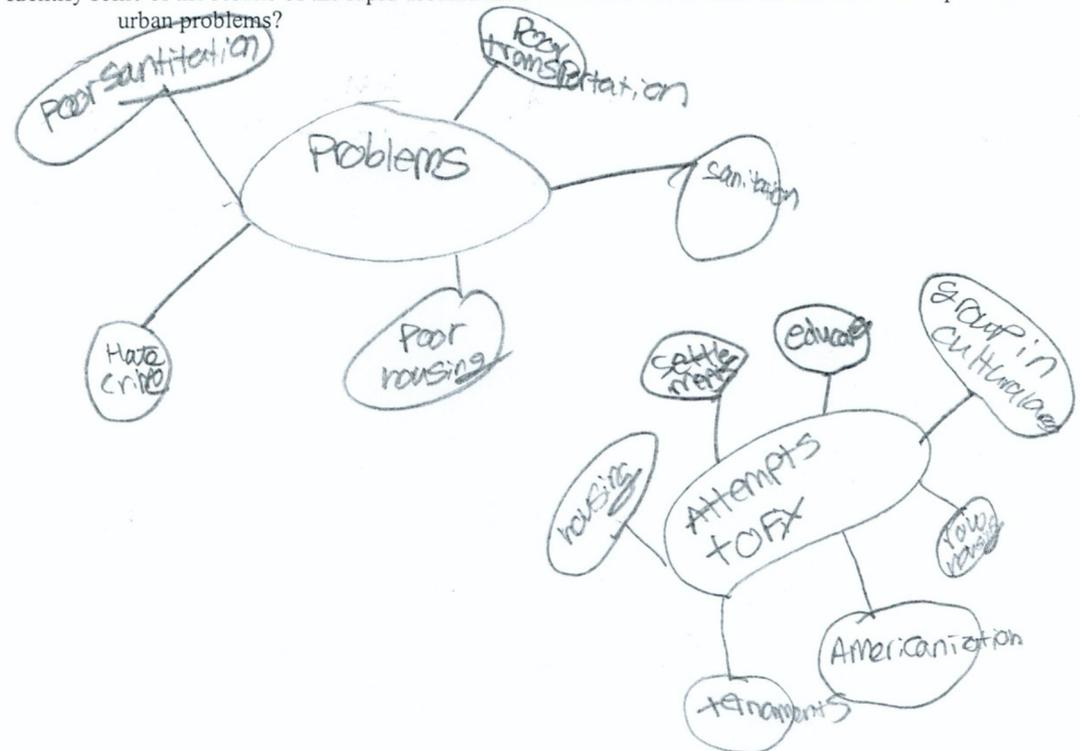
35. Explain what many of the unions were working for during this period in time?

equal Fair, and safe treatment of workers.

36. Why did many unions loose the support of the people during the late 1900's?

Because the government stepped in, and supported business owners.

Identify some of the results of the rapid urbanization of the late 1800s then discuss some attempts made to ease urban problems?



Strategy

Function

Examples

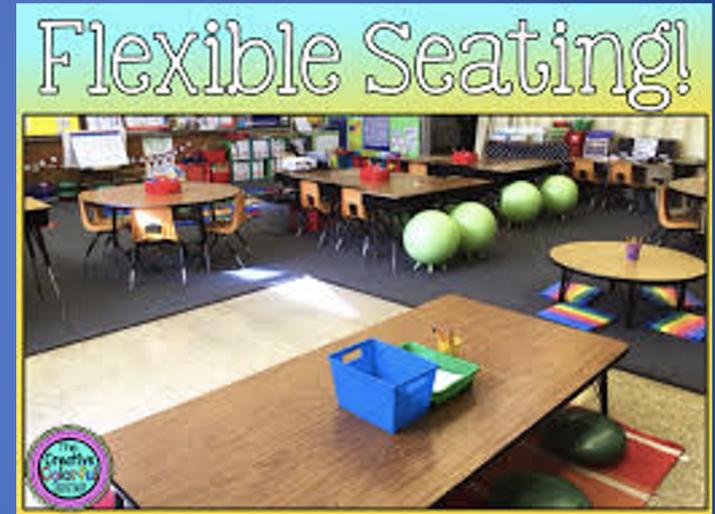
**ENRICHING  
ENVIRONMENT WITH  
SENSORY STIMULI**

Provide access to appropriate behaviors

- Get/obtain

- Allow learner to play with a fidget toy when teacher is reading from text
- Provide access to a rocking chair to allow for rocking

# Examples of Fidget Tools and Flexible Seating Options



# Let's Watch and Example of Sensory



**AFIRM**

Autism Focused Intervention  
Resources and Modules

# Practice with Feedback

Watch the video segment and identify:

1. Probable function of the wandering behavior
1. ABI that could be used to prevent the wandering



# Next Steps

**AFIRM** Autism Focused Intervention Resources & Modules

## Visual Supports (VS) —Step-by-Step Guide—

**BEFORE YOU START...**

Each of the following points is important to address so that you can be sure the selected EBP is likely to address the learning needs of your student.

Have you found out more information about...?

- Established a goal or outcome that clearly states when the behavior will occur, what the target skill is, and how the team will know when the skill is **mastered**.
- Identifying evidence **based practices**...

**If the answer to any of these is "no,"** review the process of how to select an EBP.

**For more information visit:**  
[www.afirm.fpg.unc.edu](http://www.afirm.fpg.unc.edu)

Visual Supports National Professional Development Center on ASD 2015 1

Use the step by step practice guide and the other AFIRM resources to plan how you will use ABI!

Once you identify a target student, work with your Implementation Coach to use ABI with Fidelity!

# What's Next

## Antecedent-based Interventions (ABI) —Implementation Checklist—

*To find out more information about...*

- Establishing a goal or outcome that clearly states when the behavior will occur, what the target skill is, and how the team will know when the skill is mastered.
- Identifying evidence-based practices

Refer to the "Selecting EBPs" section on the website:  
[afirm.fpg.unc.edu](http://afirm.fpg.unc.edu)

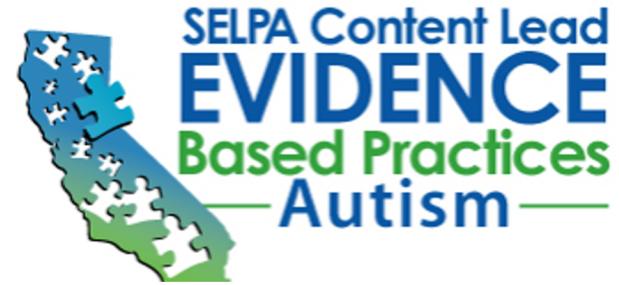
	Observation	1	2	3	4
Date					
Observer's Initials					
<b>Step 1: Planning</b>					
1.1	Identify and define interfering behavior through an FBA.				
1.2	Collect data using direct observation methods.				
1.3	Review data collected from direct observations.				
1.4	Develop a hypothesis statement and an overall goal.				
<b>Step 2: Using</b>					
2.1	Select an ABI strategy that addresses the function of the interfering behavior.				
	<input type="checkbox"/> Using learner preferences				
	<input type="checkbox"/> Changing schedules/routines				
	<input type="checkbox"/> Implementing pre-activity interventions				
	<input type="checkbox"/> Using choice-making				
	<input type="checkbox"/> Altering how instruction is delivered				
	<input type="checkbox"/> Enriching the environment with sensory stimuli				
2.2	Create lesson plan that includes selected ABI strategy.				
2.3	Ignore interfering behavior.				
2.4	Provide learner with reinforcement.				
<b>Step 3: Monitoring</b>					
3.1	Collect and analyze data on interfering behavior				
3.2	Determine next steps based on learner progress				

**AFIRM** Action Focused Intervention Resources and Modules

# Post Training

- Please complete the Post Training Assessment:

*\*Trainer must enter their Regional specific link to Post-Training Assessment\**



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