

# **Embedded Instruction for Early Learning** *Tools for Teachers*

Module 3:
When to Teach
&
How to Teach





#### **Ground Rules**

- Settle in and be comfortable
- Participate, ask questions, and reflect
- Post questions in the parking lot
- Talk or text in the hallway
- Silence phones
- Get to know each other and enjoy...





#### **Tools for Teachers Workshops**

Module 1: Overview Webinar

Module 2: What to Teach

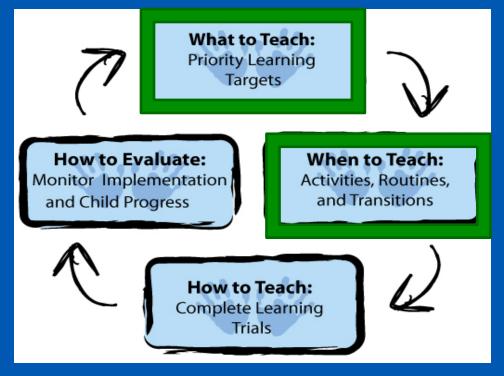
Module 3: When to Teach & How to Teach

Module 4: How to Evaluate



# Embedded Instruction for Early Learning *Tools for Teachers*

When to Teach





#### Key Practices: When to Teach

- 5. Develop and implement activities, routines, and transitions that are designed to support the engagement and learning of all children.
- 6. Select which activities, routines, and transitions are logical and appropriate to embed meaningful opportunities to practice a specified priority learning target behavior.
- Use massed, spaced, or distributed instructional learning trials to embed multiple opportunities to practice the priority learning target behavior within and across activities, routines, and transitions, considering frequency, intensity, and duration of instruction needed.
- 8. Develop an **activity matrix** to record when and how many instructional trials I plan to embed to optimize child learning on priority learning targets.



### After completing When to Teach, you will be able to:

- Identify the characteristics of high-quality activities
- Select activities, routines, or transitions that are logical and appropriate for embedded instruction
- Plan which and how many instructional learning trials to embed across activities, routines, and transitions
- Develop an Activity Matrix



# **Embedded Instruction for Early Learning** *Tools for Teachers*

High Quality
Activities:
Balancing the
Classroom
Schedule





#### What Makes an Activity?

- High-quality activities
  - Developmentally appropriate
  - Flexible and dynamic
  - Balance between adult-guided and childinitiated
- Multiple and meaningful embedded learning opportunities
  - Children are interested and engaged
  - Skills targeted are part of natural flow or logical to activity (aka a good "fit")
  - Sufficient opportunities



### **High-Quality Activities**













#### What are Activities?

- Types of "Activities"
  - Activities
  - Routines
  - Transitions

Degree of "Structure" Continuum



Adult-Guided......Child-initiated





Peer-Mediated Experience



Adult-Guided Experience







#### **Optimal Learning**

#### Each child's equation is different...

**Child-Initiated Peer-Mediated** 

**Adult-Guided** 

**Child-Initiated** 

**Peer-Mediated** 

**Adult-Guided** 

**Child-Initiated** 

**Peer-Mediated** 

**Adult-Guided** 

#### **Optimal Learning**



#### **Adult-Guided Activities**

- Planned and led by the teacher
- Includes large-group and small-group activities

 Often "structured" with more limited opportunities for child choice or free

expression





#### **Child-Initiated Activities**

- Frequent opportunities for child choice and free expression
- Children initiate and persist in an activity
- Includes free choice, center time, or other activities that the child chooses to do and completes using materials they choose



Adult-Guided Child-Initiated



#### **Transitions & Routines**







## Let's Analyze Your Daily Schedule and Activities



- Program Requirements
  - Scheduled times for lunch, outside, therapies?
- Number of Staff and Children Present
  - Consistent or variable?
- Small/Large Group
  - Mix?
- Adult-Guided vs. Child-Initiated
  - Balance?
- Location
  - Inside classroom, outdoors
- Variation across Days
  - Flexible and dynamic?

What's working well?

What might you want to change?

Why?



# **Embedded Instruction for Early Learning** *Tools for Teachers*

High Quality
Activities:
Finding the "Fit"





#### Find the "Fit"







#### One-Step Behaviors/Skills for Embedded Instruction

- More easily embedded
- "Single" behavior or response
- Only one behavior the child does to receive a positive consequence

#### **One-Step Skill (Discrete/** Multi-Step or "Chained" Skills **Response Class**) Name objects using one word Wash hands (water on, soap, Count up to 3 moveable objects rinse, towel, water off, trash) Sort objects by shape Complete steps of transition Use 2-3 words to request objects (clean up, select a visual cue, from peers and adults move to the correct center, and Give an object to a peer begin to play) Sign "help" Solve a social problem (identify the problem, generate solutions, select a solution and try it out)

#### **Learning Target**

(Consider child's abilities, priority skills, preferences, & support needs)

### Activity, Routine, or Transition

(Characteristics & "demands")

High-Quality Teaching & Embedded Instruction

#### **Learning Target**

(Consider child's abilities, priority skills, preferences, & support needs)

Ask a peer to pass the juice

> Name Color Objects

Point to objects in books

Activity, Routine, or Transition

(Characteristics & "demands")

<u>Fit</u>

**Natural** 

Snack

Logical

Snack

Snack



# **Embedded Instruction for Early Learning** *Tools for Teachers*

High Quality
Activities:
Create an
Activity Matrix





#### **Activity Matrix**

An <u>Activity Matrix</u> helps to ensure teaching occurs.

It reminds teachers of:

- the planned schedule of activities,
- the number and type of activities in the day,
- the PLTs and ELOs planned, and
- the number of adults who are able to assist.



#### Making an Activity Matrix

Step 1: List apredictable, balanced classroom schedule of activities — list the activities and times of day in the left-hand column of the chart





#### A Well-Planned Activity Matrix

#### Things to think about:

- "Fit" between the child's priority learning target and the activity
- Consider natural and logical locations in which the behavior occurs
- Consider staff who are available during daily activities
- Identify the number of opportunities needed for practice
- Include a sufficient numbers of trials given the child's phase of learning



#### Activity Matrices in the Classroom



We can use activity matrices in a variety of ways to support embedded instruction.



#### **Class Activity Matrix**

T	Anna	Kiana	Xander
Arrival	Remove	Respond to Greeting X3	
Free Play	Complete closed ended task x2	Accept and use toy offered by feer	Initiate Request Join in to Peer ongoing Play
Circle	Jump up with 2 fect together ×3	Imitale Gross Notor Actions	Answer Where question
outside	2 Word phrase With 1 descriptive X2	Follow 1-step Directions X3	Catch and throw for 3 cycles
nack	2 word phrase with 1 description x3	Drink from open cup	Respond to peer request
ee Play	Complek closed ended task	use 2 hands together	Initiate Request to Recr ×3



#### Specific Area of Classroom Matrix





## Scheduled Activity and Associated Activity Types Matrix

	Anna	Kiana	Xander
Group	Jump up With 2 Fact tagether X2	Follow 1 Step Directions X1	
Big		Follow 1 Step Directions × 2	
lay	2 Word phrase with 1 descriptive X2		Catch and throw for 3 cycles



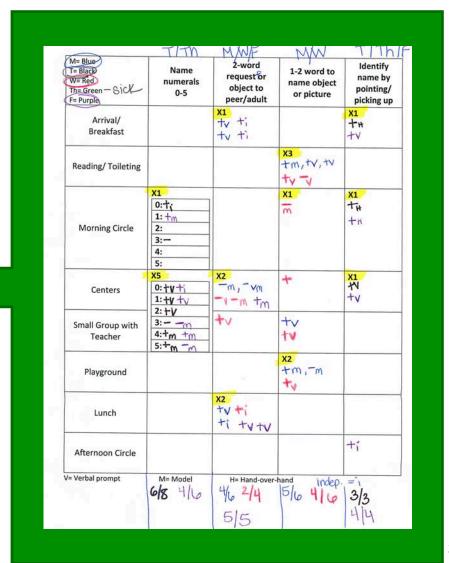
#### **Data Collection Plan Matrix**

	Mia	Matthew	Leo
Arrival			
Morning Activity	Name colors <b>Assistant-M, T, W</b>		Sort objects by color Assistant-M, T, W
Breakfast	1-2 word request for object  Team Rotate Each Day-Daily		
Circle		Move objects or himself in relation to another object or location  Assistant-Daily	
Table Games	1-2 word request for object Activity Facilitator-Daily	Hold marker/paintbrush and make markings on paper Activity Facilitator-Daily	
Outdoor Play		Move objects or himself in relation to another object or location  Team Rotate Each Day-Daily	
Snack			
Centers	Name colors <b>Teacher-M, T, W</b>	Hold marker/paintbrush and make markings on paper  Teacher-Daily	Sort objects by color <b>Activity Facilitator-T/TH</b>
Departure			30
<b>Transitions</b>			



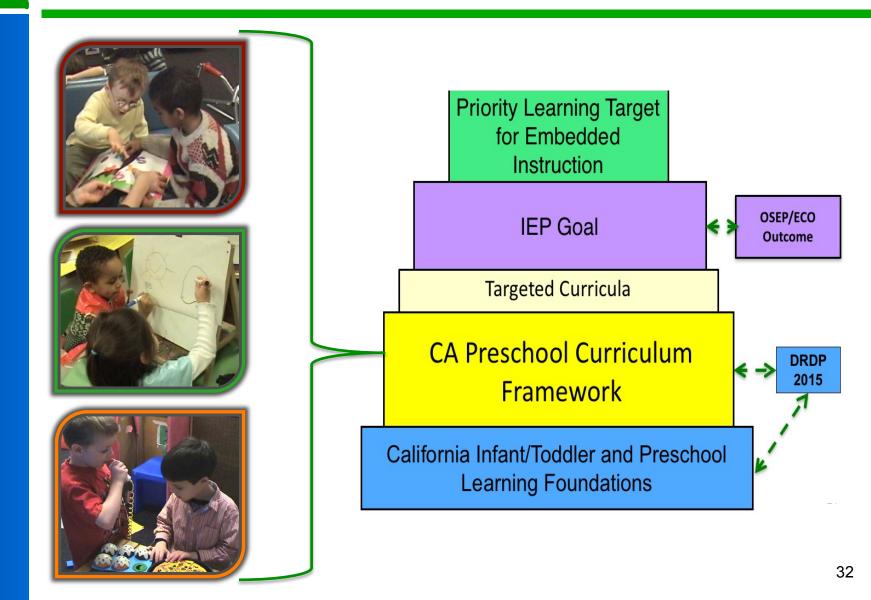
## Data Collection Matrix for an Individual Child







### The Preschool Standards and Curriculum are the Foundation for Embedded Instruction





### Linking to General Preschool Curriculum & Activities

Free Play	Mia	Matthew	Leo
Blocks	Name colors (x2)	Move objects or himself in relation to another objects or location (x2)	
House		Move objects or himself in relation to another objects or location (x2)	
Table Toys	Give/Point to big/ little object (x3)		
Art		Hold marker/ paintbrush and make markings on paper (x6)	
Sand/Water			Sort objects by color (x3)
Books	Name object in a picture (x3)		



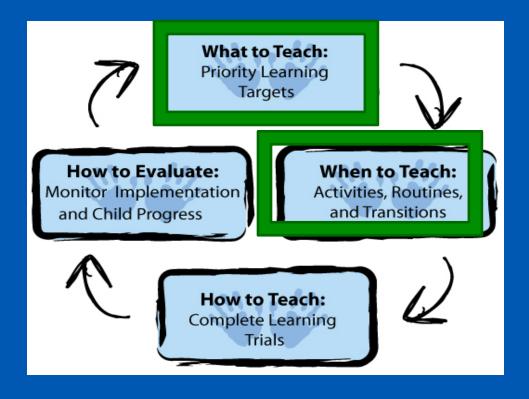
### **General Preschool Activities**

Weekly Topic: BUGS	Free Play	
Blocks	Models of bugs built from blocks (add duplo)	
House	Ant farm	
Table Toys	Bug and butterfly puzzles; lotto game with bug stickers	
Art	Build a bug (build bugs from craft leftovers–top rolls, buttons, boxes, string) Paint a picture of a bug	
Sand/Water	Plastic bugs for counting and sorting	
	The Bugliest Bug, The Little Squeegy Bug, I Love Bugs, Everything Bug: What Kids Really Want to Know about Bugs (Kids' FAQ's)	
Books	A photograph album with photos of insects from our nature walk	
	Word and picture matching on felt board (grasshopper, ladybug, spider, ant, firefly, etc.)	



## Embedded Instruction for Early Learning *Tools for Teachers*

Putting the Practices
Together:
What to Teach
When to Teach





## Considering What to Teach and When to Teach

- What does the PLT tell you about when the trials should occur?
- What does the PLT tell you about how many trials should occur?
- Davion will use 3-word phrases when making requests (e.g., I want\_\_\_\_, my turn please) to an adult or peer during free play, snack, and class activity time when asked by an adult ("What do you want?") at least four times a day across two activities for four consecutive days.



## Linking PLT and the Activity Matrix

Davion will use 3-word phrases when making requests (e.g., I want\_\_\_\_, my turn please) to an adult or peer during free play, snack, and class activity time when asked by an adult ("What do you want?") at least four times a day across two activities for four consecutive days.

	Davion	Sam	Cindy
Arrival		Point to name—2	Greet peers—2
Circle		Point to name—1	
Centers	Initiate play by asking to join—2 Count 3 objects—2	Point to shapes—5 Use 1 word to request more—5	Use both hands to pour—2 Use 2 words to request preferred item—5
Outside	Initiate play by asking to join –2	Jump over small objects—5	Greet peers—2
Snack	3-word phrases for requests—3 Count 3 objects—2		Use both hands to pour—5
Class Activity	3-word phrases for requests—3	Point to name—2 Point to shapes—3	Follow 1-step directions—3
Free Play	Initiate play by asking to join —2 Count 3 objects—2 <b>3-word phrases for request—3</b>	Use 1 word to request more—5	Use 2 words to request preferred item—5
Departure		Jump over small objects—2	Follow 1-step directions—1
Transitions	Walk up and down stairs—6		Follow 1-step directions—2



#### Ensuring a "Sufficient" Number of **Learning Trials**

Learning trials can be distributed, massed, or spaced within or across activities



Massed Spaced

**Learning trials** 

should occur in a context that is meaningful for the child.



#### **Embedded-Distributed Trial**



#### **Distributed Trials**

- Learning trials embedded into activities or routines and <u>distributed</u> throughout the day
- Time between learning trials to perform other skills or participate in other activities



#### **Promotes Mastery**

Might be helpful to support the maintenance and generalization of a learned skill



#### **Embedded-Massed Trial**



#### **Massed Trials**

- Learning trials embedded into everyday activities and routines and <u>delivered</u> <u>very closely</u> together in <u>time</u>
- Focus on one behavior with repeated practice



#### **Promotes Learning**

Might be helpful when child is acquiring a skill or becoming fluent in using a skill



#### **Embedded-Spaced Trial**



#### **Spaced Trials**

- Learning trials
   <u>inserted into</u>
   <u>everyday activities</u>
   <u>and routines</u> with
   pauses between trials
- Practice on target behavior spaced between another behavior



### Promotes Learning and Mastery

Might be helpful when child is <u>acquiring</u> a skill or <u>becoming fluent</u> in using the skill

Might be helpful to support the <u>maintenance</u> and <u>generalization</u> of a learned skill



#### Let's Try It!

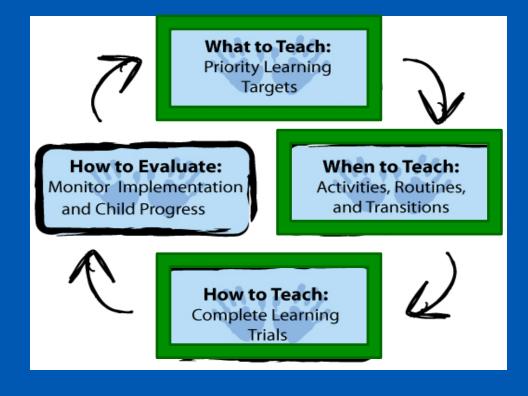


- Create an activity matrix with your classroom schedule and select a PLT
- Look carefully at the activities and criterion
- Consider the "fit" between the PLT and your ongoing activities, routines, and transitions
- Make a decision about <u>when</u> and <u>how many</u> trials you plan to deliver for that PLT



# **Embedded Instruction for Early Learning** *Tools for Teachers*

How to Teach





#### Key Practices: How to Teach

- 8. Use and fade systematic prompting strategies to teach the priority learning target behavior and promote child engagement and learning.
- 9. Implement complete learning trials that include (a) an environmental arrangement and/or prompt to elicit the priority learning target behavior (antecedent), (b) additional help to elicit the priority learning target behavior if the behavior does not occur, and (c) an appropriate response following the child behavior (consequence). WE CALL THIS A COMPLETE LEARNING TRIAL!
- 10. Individualize an **instructional plan** based on the characteristics of the child (e.g., preferences, interests, phase and pace of learning) and the target behavior (e.g., type of skill and level of support needed)..



# After completing How to Teach, you will be able to:

- Identify the instructional components of complete learning trials
- Develop instructional plans, including the following components:
  - How to identify the target behavior
  - What to say or do to elicit the target behavior (antecedent)
  - What additional help (prompts) to provide, if the child does NOT demonstrate the target behavior
  - How to respond when the target behavior occurs (consequence)
  - What feedback to provide to end the trial, if child does not demonstrate the target behavior after additional help



#### Remember the webinar...

Child uses 2-3 words to request (e.g., open please, I need help, more goldfish), following an adult prompt during meals, centers, and transitions. I will know he has accomplished this target when he can make a request in each of the 3 activities for 3 out of 5 days.

Antecedent - Behavior - Consequence

# What will you do or say?

Set-up situations in which child will need help

Say to him – "Tell [peer] that you need help, s/he'll help you."

#### What do you want the child do?

Ask peer for help (e.g., open please, I need help, help me [peer])

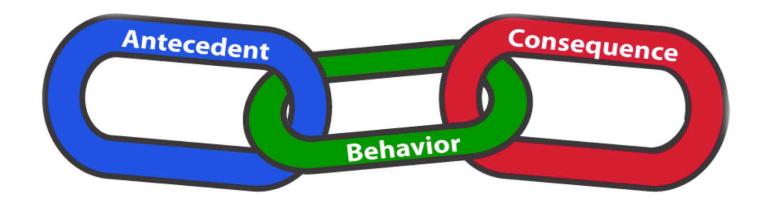
# What will you do if the child does the behavior?

Child gets the help he needs

Teacher or peer may provide praise



#### **Complete Learning Trial**



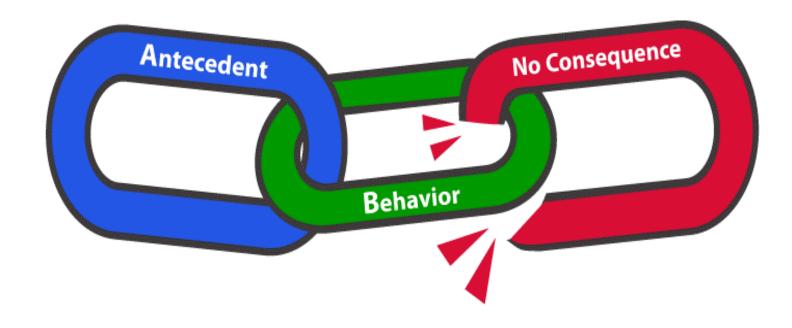


# Let's Look at an Example





#### **Incomplete Learning Trial**



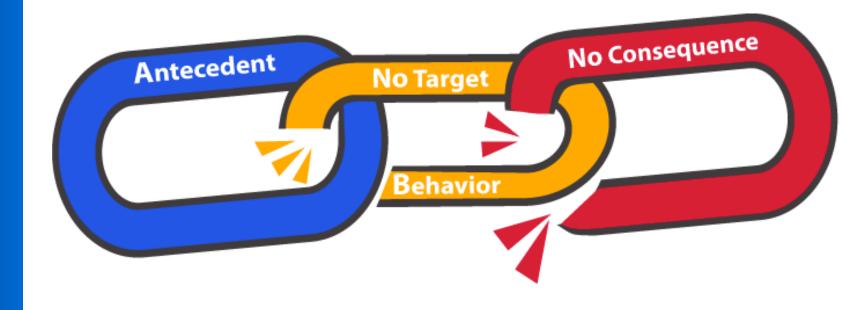


## Let's Look at an Example





#### **Another Incomplete Learning Trial**



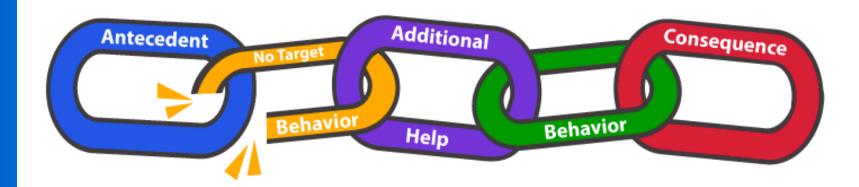


### Let's Look at an Example





### **Another Complete Learning Trial**



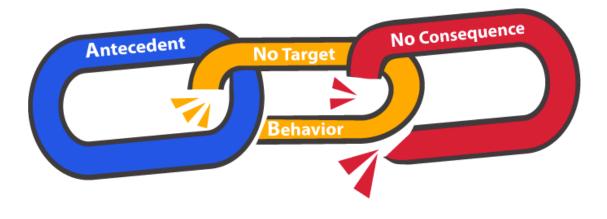


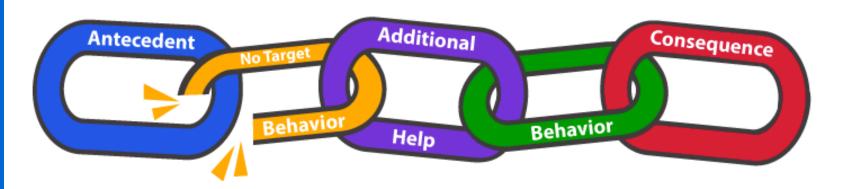
### Let's Look at an Example





### **Learning Trials**







# Why are Complete Learning Trials Important?

- Young children need sufficient learning opportunities
- Children should experience high quality environments, responsive interactions, and effective instruction
- Embedded instruction does not necessarily result in early learning if we do not consider A-B-C and ensure complete learning trials



### Planning For Success: Developing Instructional Plans

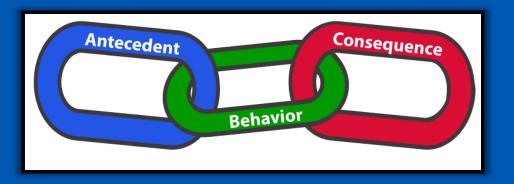
- Describe the target behavior
- Plan for how you will implement each component of a complete learning trial
  - Antecedents
  - Additional Help
  - Consequences/Feedback
- Plan for collecting data on your implementation of complete learning trials
- The instructional plan is a tool for planning for the components of complete learning trials, but might not be needed for every priority learning target.

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# Embedded Instruction for Early Learning *Tools for Teachers*

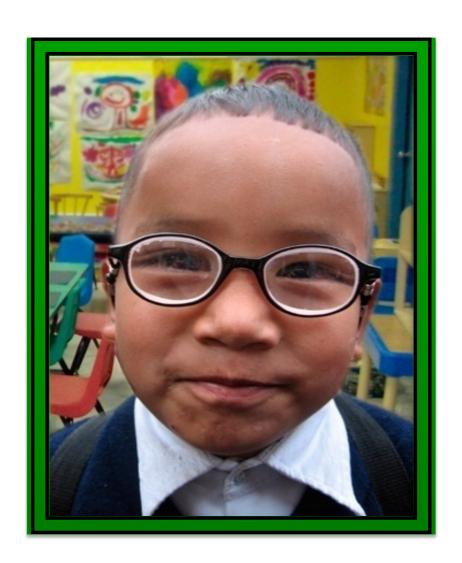
Complete
Learning Trial
Components





## Davion's Story







#### Davion's Instructional Plan

Davion will initiate play with another child by asking to join in (e.g., Can I play?, My turn) following a teacher model during centers, free play, and outside at least six times a day for five consecutive days.

What is the target behavior?

What activities were selected for embedding trials on this target?

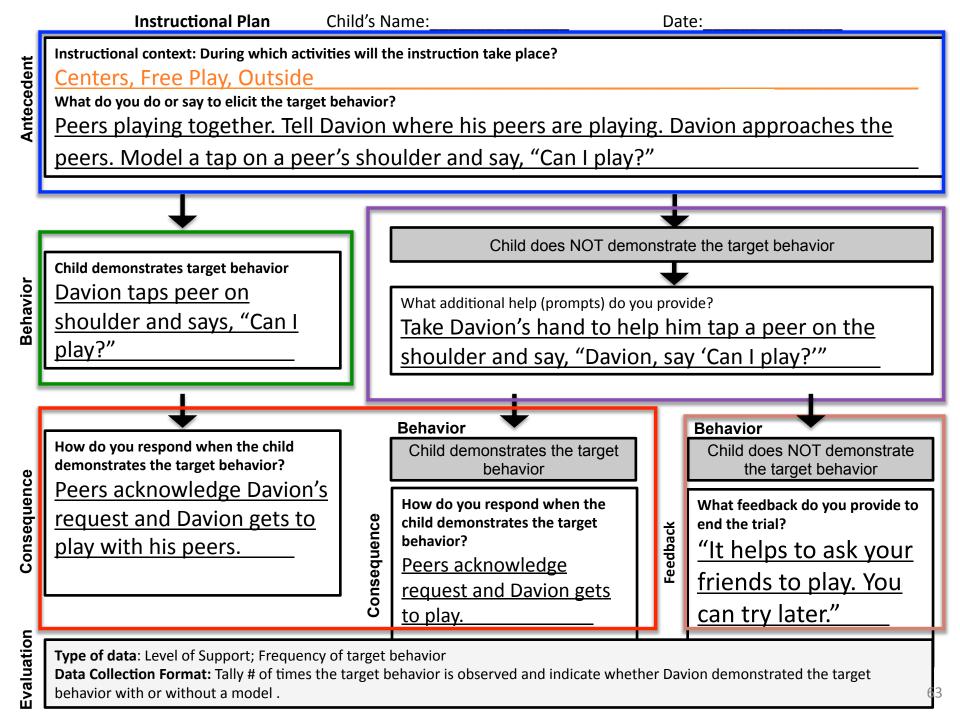
Why do we think these activities were selected?

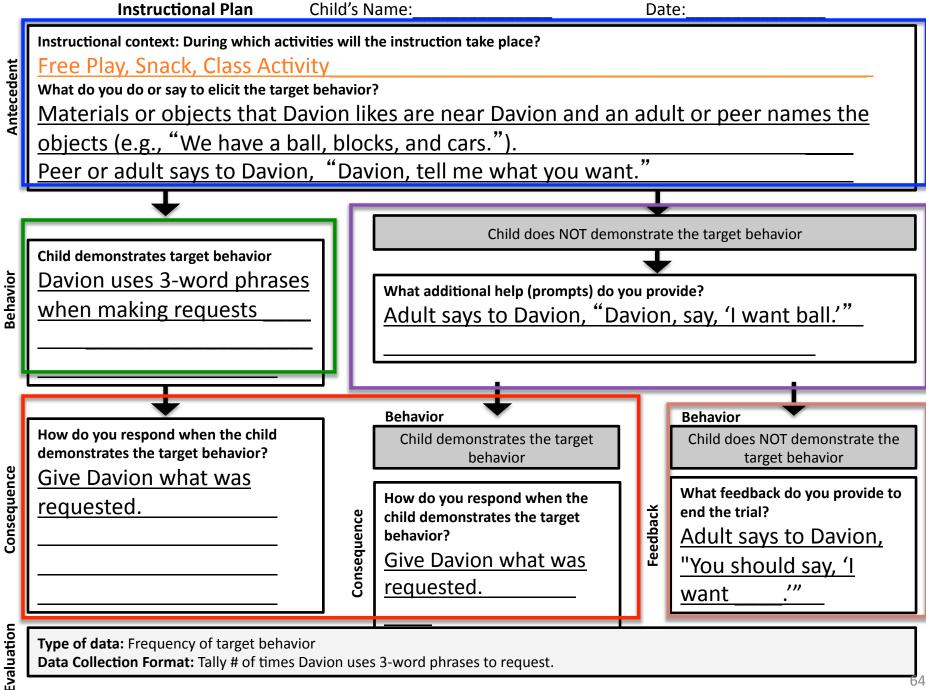
What would we do or say to elicit this behavior?

If the child does NOT demonstrate the target behavior, what additional help (prompts) could we provide?

How would we respond when the behavior occurs?

If, after additional help, the child still does NOT demonstrate the target behavior, what feedback could we provide to end the trial?







# **Embedded Instruction for Early Learning** *Tools for Teachers*

Let's Look at Each Component





# Embedded Instruction for Early Learning *Tools for Teachers*

What is the target behavior?





#### What are Behaviors?

Behaviors are actions you can see or hear the child do

 For embedded instruction the behavior should be important for the child to learn and "proximal" to the child's current level



## Let's Look at Some Examples







### A Priority Learning Target for Davion

Davion will count sets of up to 3 moveable objects (e.g., blocks, toy cars, crackers) when asked by an adult during centers, free play, and snack for 80% of the opportunities across a day for two consecutive days.



# Embedded Instruction for Early Learning *Tools for Teachers*

What do you say or do to elicit the target behavior?

Antecedents





#### What are Antecedents?

Antecedents are objects, events, or behaviors that <u>set the occasion for the occurrence</u> of the targeted behavior.

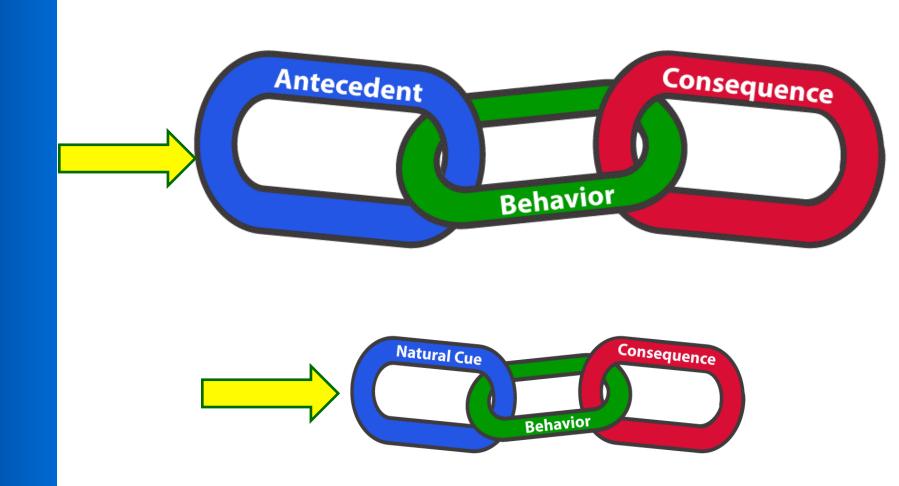


#### Types of Antecedents

- Materials, objects, or people
- A situation or event
- A direction or question
  - Verbal (comments, directives, or questions)
  - Non-verbal (communicative gestures or pictures)
- A previous behavior in a chain or steps in a routine



#### Natural Cue as an Antecedent





### Let's Look at Some Examples







# **Embedded Instruction for Early Learning** *Tools for Teachers*

Prompts
In addition to natural cues





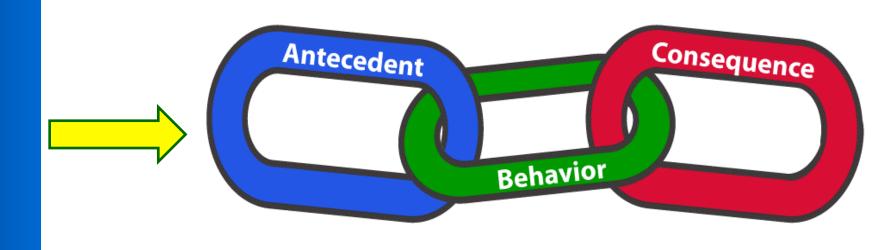
### What is a prompt?

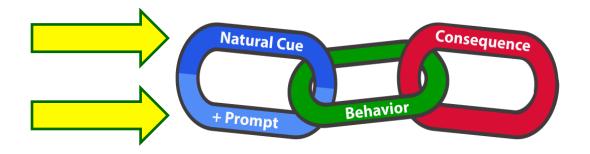
A **prompt** is something done in addition to the natural cue to increase the likelihood that the child will produce the target behavior.

Prompts help to elicit a behavior.



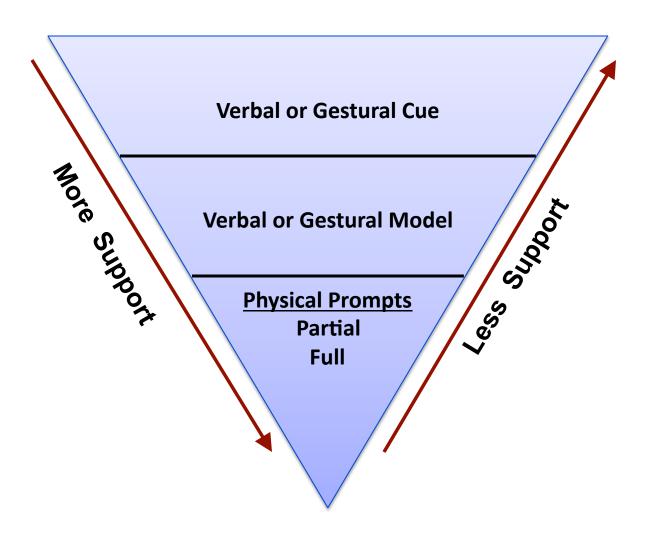
### Antecedent that Includes a Prompt in Addition to a Natural Cue







#### Levels of Prompts





#### Antecedent with a Prompt



Antecedent

**Natural Cue** 

**Prompt** 



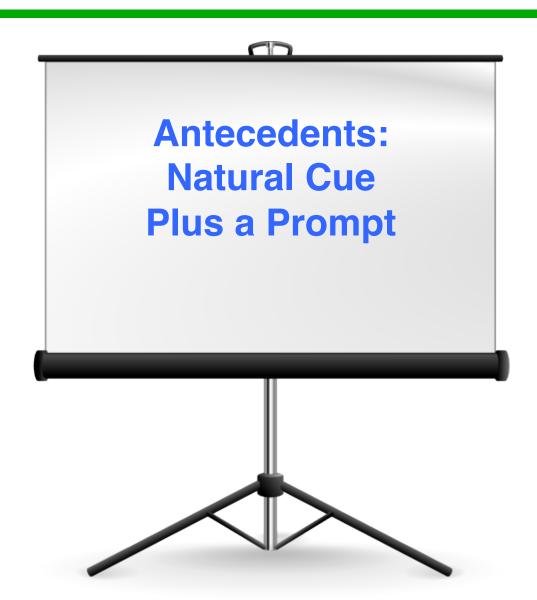


Consequence



#### Let's Look at Some Examples





**Antecedent** 



#### Remember...

- Antecedents always include natural cues to elicit the target behavior.
- Antecedents might include a natural cue PLUS a prompt(s) when the behavior is new or challenging for a child.
- Prompts should be selected based on the characteristics of the child and the characteristics of the priority learning target behavior.
- Prompts are not a necessary part of every antecedent.
- Prompts should be faded out as soon as possible.



# Embedded Instruction for Early Learning *Tools for Teachers*

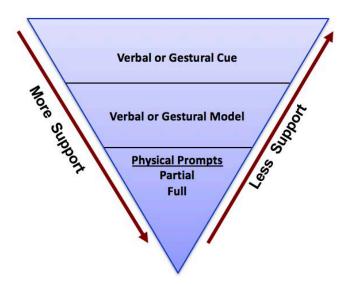
The Importance of Fading Prompts





#### **Fading Prompts**

Remember to "fade" any prompts that you provide by gradually decreasing prompts over time until the behavior occurs independently *in response to the natural cue (A)*.



#### Fading Prompts for Davion

Adult says, "Time to go downstairs for lunch."

A =

Adult holds Davion's hand, actively steadying him as he descends, cueing him to slide his foot to find the step's edge.

Adult says, "Time to go downstairs for lunch."

**A** =

Adult holds the other end of a short dowel with Davion as he descends, cueing him to find each step's edge.

**B** = Davion walks down the stairs.

**C** = Davion enters the lunchroom to eat.

**B** = Davion walks down the stairs.

**C** = Davion enters the lunchroom to eat.



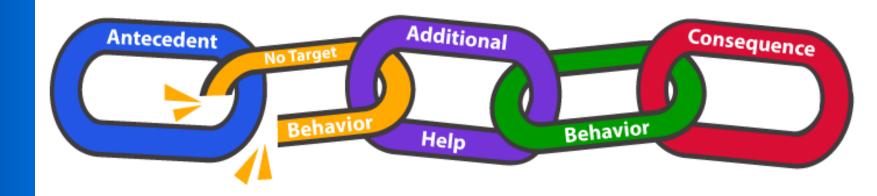
# **Embedded Instruction for Early Learning** *Tools for Teachers*

Additional Help:
What do you do if the child does NOT demonstrate the target behavior?





### A-B-C with Additional Help









### Providing Additional Help (Prompts)

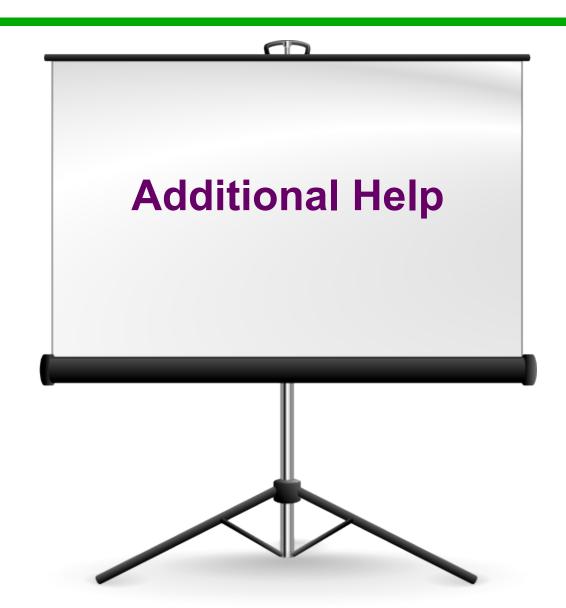
If the child does not demonstrate the target behavior, you might:

- Repeat the prompt (if a prompt was provided as part of the antecedent)
- Provide a different or more supportive prompt that will help the child perform the target behavior
- Provide a prompt in which you guide the child through the target behavior (physical prompt)



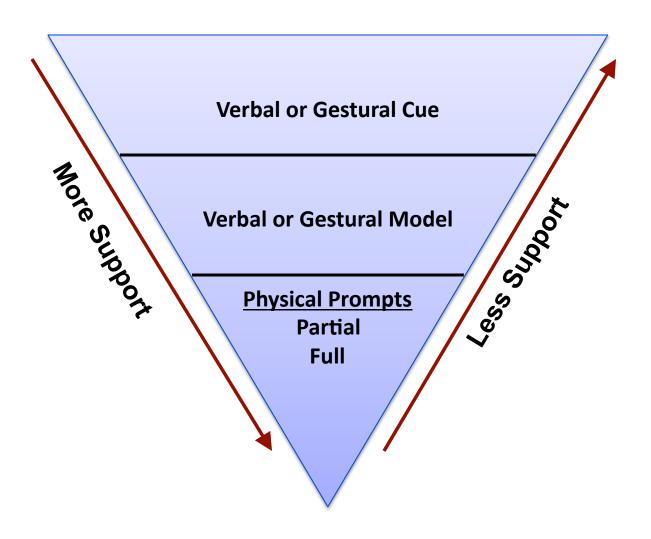
#### Let's Look at Some Examples







#### Remember Levels of Prompts





## **Embedded Instruction for Early Learning** *Tools for Teachers*

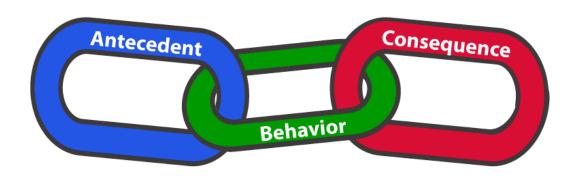
What do you do when the target behavior occurs?

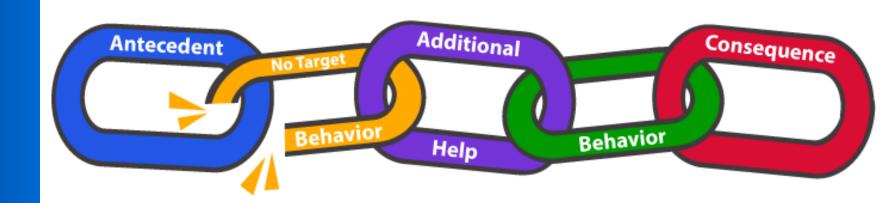
Consequences





### A Consequence Ends a Complete Learning Trial







#### What are Positive Consequences?

A positive consequence is something that is presented in the child's environment *immediately* following his/her behavior that makes it more likely that the child will produce that same behavior again in the presence of the same antecedent.









### Types of Consequences



Naturally Occurring Consequences

Planned Consequences



#### **Naturally Occurring Consequences**

- Access to preferred toys, materials, activities, and people
- Continued social interaction
- Acknowledgement
- Understanding, learning, or mastering (e.g., I'm doing it!)



### Planned Consequences

- Token, food, preferred object, or activity
- Feedback
  - Praise from a peer or adult
  - Descriptive feedback
- It is important to fade planned consequences!



#### Positive Consequences

- Consider
  - Naturally occurring or planned
  - How frequently to use consequences
- Select consequences that are
  - Meaningful to the child
  - Appropriate for the characteristics of the child, target behavior, and activity



#### Let's Look at Some Examples







# Embedded Instruction for Early Learning *Tools for Teachers*

Ending the Trial if the Target Behavior Does Not Occur





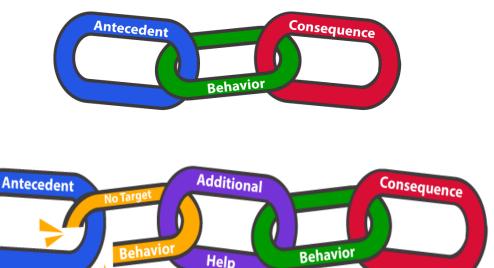
#### Three Possibilities

- 1) Learning trial is complete
- 2) Learning trial is **incomplete** because the child did not demonstrate the behavior or the teacher did not provide a consequence
- 3) Learning trial implemented correctly by teacher, but child behavior did not occur



#### Possibility 1: Complete

 Target behavior occurs (with or without additional help) and a consequence is provided → learning trial is complete

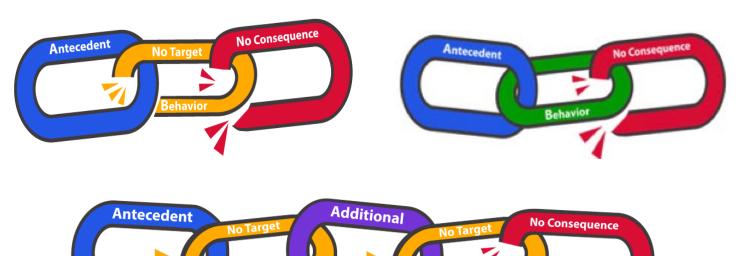




#### Possibility 2: Incomplete

- 2) The child did not demonstrate the behavior even with additional help or the teacher did not provide a consequence
  - → learning trial is incomplete

**Behavior** 



Help



#### Possibility 3: Correct

3) Target behavior does not occur – even with additional help (prompts) → learning trial implemented correctly by teacher, but child behavior did not occur





### Learning Trial in Which the Target Behavior Does NOT Occur

- If the child does **not** perform the target behavior even with additional help
- The adult decides to end the trial
- The trial should end with feedback







#### It's as Easy as ABC!

Antecedent	Behavior	Consequence
Give Davion 3 objects and say, "How many?" (Objects and the background are high contrast to support vision)	Davion says, "1-2-3" while moving each object	Say, "Great job, you counted three objects, 1, 2, 3," (point to each again).
Point to and tap each item before Davion moves it		

Antecedent	No Behavior	Additional Help	Behavior	Consequence
Give Davion 3 objects and say, "How many?" (Objects and the background are high contrast to support vision)		Take Davion's hand and help him point to each object one at a time.  If Davion still does not count,	Davion says, "1- 2-3" while moving each object	Say, "Great job, you counted three objects, 1, 2, 3," (point to each again).
Point to and tap each item before Davion moves it		say, "Say 1, say 2,"		

Antecedent	No Behavior	Additional Help	No Behavior	Feedback
Give Davion 3 objects and say, "How many?" (Objects and the background are high contrast to support vision)		Take Davion's hand and help him point to each object one at a time.  If Davion still does not count,		Say, "This is how we count," and count the objects. Then say, "We can tre again later."
Point to and tap each item before Davion moves it		say, "Say 1, say 2,"		





# Embedded Instruction for Early Learning *Tools for Teachers*

Building Complete Learning Trials for the Children you Teach





#### Review and Wrap-Up

Today, you have learned how to develop instructional plans to guide the implementation of embedded instruction that includes the following components:

- •How to identify the target behavior
- What to say or do to elicit the target behavior (antecedent)
  - If needed, what prompts will be used to elicit the target behavior
- •How to respond when the target behavior occurs (consequence)
- What prompts (additional help) to provide, if the child does NOT demonstrate the target behavior
- What feedback to provide to end the trial, if child still does NOT demonstrate the target behavior



#### Let's Try It!



- Work on one PLT for the other two children in your classroom
- Develop an instructional plan(s) to support the child to demonstrate the behavior in the activities you selected
- Think about how you will discuss this plan with other members of your team



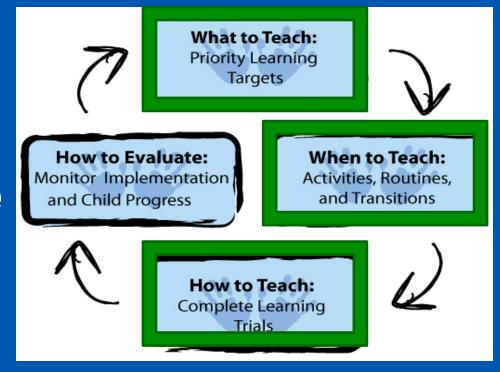
#### Before next time...

- Videotape yourself implementing your instructional plan
- Sharing your video will be voluntary, but we believe it is a valuable opportunity for reflection and to gain insight from our Embedded Instruction for Early Learning community
- Learning trials that are not complete can still be used as a learning opportunity



# Embedded Instruction for Early Learning *Tools for Teachers*

Up next
How to Evaluate





# **Embedded Instruction for Early Learning** *Tools for Teachers*

### Thank you!

See you at Module 4
How to Evaluate!