Embedded Instruction for Early Learning

Tools for Teachers - CA

Practice Guide

This guide belongs to: _____

Embedded Instruction for Early Learning

Practice Guide
(2018)

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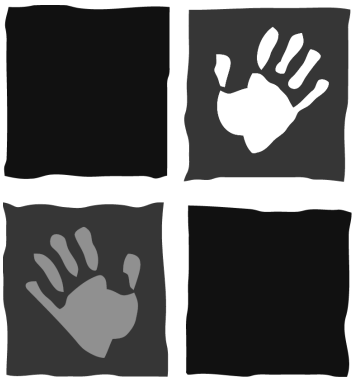

Welcome to the *Embedded Instruction for Early Learning: Tools for Teachers* workshop series. This workshop series is part of a comprehensive professional development "toolkit" known as *Tools for Teachers*.

The *Embedded Instruction for Early Learning: Tools for Teachers Practice Guide* is designed for you to use back home in your classroom. The guide provides additional information and references related to the six embedded instruction teaching practices discussed in the workshop series. Use the Practice Guide to learn more about embedded instruction, refresh your memory, or to select materials to help your team learn about embedded instruction.

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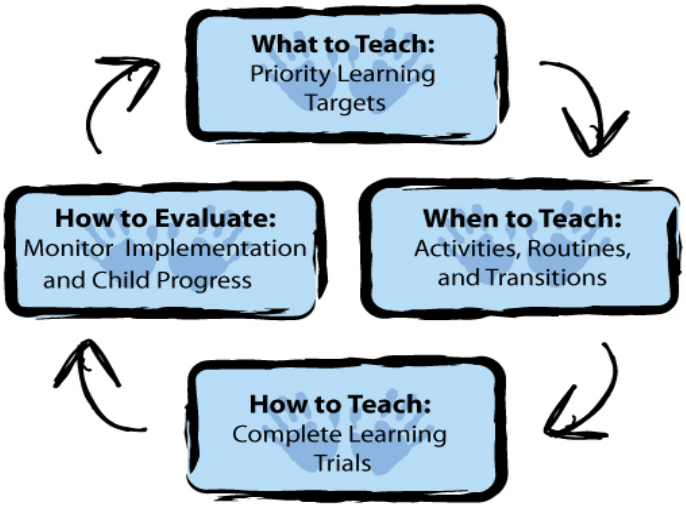
Practice Guide Introduction

Key Components of Embedded Instruction

Embedded instruction is an approach to instruction that promotes child engagement and learning in everyday activities, routines, and transitions. This is accomplished by identifying *times* and *activities* when *instructional procedures* for teaching a child's priority learning targets are *implemented* in *ongoing [naturally occurring] activities, routines, and transitions*.

Embedded Instruction focuses on:



There are six teaching practices associated with these four components of embedded instruction:

Component	Teaching Practice
What to Teach	1. Identify and align target skills for children.
	2. Write high-quality priority learning targets.
When to Teach	3. Use high-quality activities to provide multiple and meaningful embedded learning opportunities.
	4. Develop an activity matrix to plan when and how many learning opportunities to embed within and across activities.
How to Teach	5. Plan and implement embedded learning opportunities as complete learning trials.
How to Evaluate	6. Collect and analyze data on embedded instruction implementation and child progress to inform instructional decisions.

This guide is divided into four sections that focus on each of the four components of embedded instruction and the teaching practices associated with them. It includes resources that will help you:

- Define and describe embedded instruction.
- Identify and align target skills for children.
- Write high-quality priority learning targets.
- Use high-quality activities to provide multiple and meaningful embedded learning opportunities.
- Develop an activity matrix to plan when and how many learning opportunities to embed within and across activities.
- Plan and implement embedded learning opportunities as complete learning trials.
- Collect and analyze data on embedded instruction implementation and child progress to inform instructional decisions.

Some of the information in this guide will be a review of information provided in the workshop series. Some information can be used during coaching to supplement what you learn in workshops. The appendices include forms to help you plan for, implement, and evaluate embedded instruction in your classroom.

Getting Started

Embedded Instruction is an Evidence-Based Practice

Embedded instruction is a recommended and evidence-based practice in early childhood. When the Embedded Instruction for Early Learning Project began in 2007, we reviewed the existing research on embedded instruction. We found 43 studies that had been conducted in preschool settings and focused on embedded instruction approaches (Snyder et al. 2015). Two hundred eleven (211) children participated in these studies and 98% of them learned new skills when instruction was embedded during classroom activities, routines, or transitions. Since this review was conducted, we have studied the effects of embedded instruction with more than 250 teachers and 700 children (Snyder, Hemmeter, Algina, and McLean 2015; Snyder and McLean 2015; Snyder et al. 2018)

Research and practice tell us the use of embedded instruction can:

- Maximize children's motivation by considering their interests and preferences.
- Maximize children's learning by teaching the skills where and when they are needed.
- Help children master, maintain, and adapt the skills/behaviors they learn.
- Promote generalization of learned skills/behaviors across people, activities, and materials.

We know embedded instruction can work. Here is some of what we know from the embedded instruction research literature:

- Embedded instruction is effective for teaching a variety of valued skills to young children.
- A variety of intentional and systematic instructional strategies have been used effectively to provide embedded instruction.
- Embedded instruction seems to enhance children's generalization of skills.
- Teachers assess embedded instruction favorably.
- Teachers differ in the extent to which they can apply embedded instruction in their activities and classrooms.

A list of studies that have examined embedded instruction is included in the reference list at the end of this Practice Guide.

Embedded Instruction is a Recommended Practice

Embedded instruction supports children's learning during everyday activities and routines through the teachers' use of intentional and systematic instructional procedures. Embedded instruction is a recommended instructional practice according to the Division for Early Childhood (DEC) Recommended Practices (DEC 2014). The DEC Recommended Practices provide guidance about effective practices to support development and learning for young children, birth to age 5, who have or are at risk for developmental disabilities. The Recommended Practices were identified through a review of the research literature and in conjunction with the professional knowledge and wisdom of the field. The specific recommended practice relevant to *Tools for Teachers* is Recommended Practice - Instruction 5 (INS5):

> Practitioners embed instruction within and across routines, activities, and environments to provide contextually relevant learning opportunities (DEC 2014).

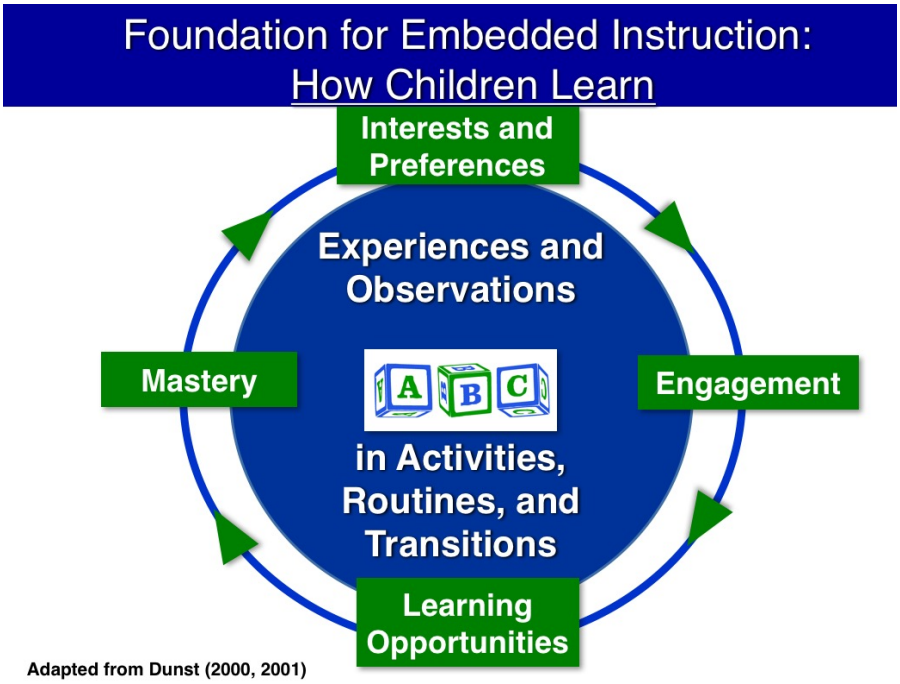
The six teaching practices associated with embedded instruction are also aligned with a number of other DEC Recommended Practices related to instruction and assessment. The DEC Recommended Practices are available online at the following web address:

http://www.dec-sped.org/dec-recommended-practices

DEC Recommended Practices

How Does Embedded Instruction Promote Learning?

The everyday experiences of young children can either promote or impede learning and development (Bronfenbrenner 1992; Hobbs 1967). Research shows young children's learning and development is more meaningful when everyday activities are the foundation for learning opportunities.



As the figure above shows, children's interests in everyday activities promote their engagement in social and nonsocial interactions, which provide them opportunities to practice skills and learn new behaviors. Repeated practice leads to mastery. Increased mastery, in turn, strengthens children's interests, setting the learning cycle into motion once again.

Children with disabilities may need additional support for engagement, learning opportunities, and mastery within the context of everyday learning activities. To provide this additional support, we can use a variety of intentional and systematic instructional procedures to implement complete learning trials. By doing so, we ensure intentional, sufficient, and systematic instruction within and across everyday activities, routines, and transitions.

Complete Learning Trials
ensure *intentional* and *systematic* instruction
within and across everyday activities, routines, and transitions.

Why Should I Use Embedded Instruction?

Embedded instruction is used to meet children's needs by providing opportunities to learn and practice important skills in meaningful contexts. Instruction can occur during ongoing classroom activities, routines, and transitions as part of the curriculum for all children.

Key features of embedded instruction:

- Addresses functional skills – skills that young children need to learn to support their access, participation, and membership in an early learning classroom.
- Teaches skills in context – skills are taught in the contexts in which they are needed.
- Teaches within and across activities, routines, and transitions.
- Uses "authentic" activities and materials to support learning.
- Uses intentional and systematic instruction.

Embedded instruction is useful during each <u>phase of learning</u>:

- ✓ **Acquisition-** Learning a new skill
- ✓ **Fluency-** Gaining the ability to perform a skill in a continuous or fluid way
- ✓ **Maintenance-** Using the same skill over time
- ✓ **Generalization-** Using learned skills or behaviors across different settings, people, times, activities, or materials
- ✓ **Adaptation-** Using elements of previously learned skills that can be adapted to new demands and situations

Key benefits of embedded instruction:

- Maximizes children's motivation by considering their interests and preferences.
- Maximizes children's learning by teaching in settings where and when the skills are needed.
- Helps children master, maintain, and adapt the skills/behaviors they learn.
- Promotes generalization of learned skills/behaviors across people, activities, and materials.

How Do I Get Started with Embedded Instruction?

Anyone can use embedded instruction. Throughout this professional development, you will gain the knowledge and experience you need to use embedded instruction successfully in your classroom. It is likely you are already using some of the embedded instruction teaching practices. This professional development has been designed to help you learn about and use all six embedded instruction teaching practices and to ensure you provide a sufficient number of embedded learning opportunities for young children across classroom activities, routines, and transitions.

We recommend that you use this Practice Guide to help support your implementation of embedded instruction. To get started, select a child in your classroom and begin!

First, you will need to make decisions about ***What to Teach*.** Use information in the *What to Teach* section of the Practice Guide to:

- Ensure your IEP goals and target skills are aligned with the early learning foundations and the general preschool curriculum.
- Identify target skills that are observable and measurable, developmentally appropriate, functional and aligned, and generative.
- Write high-quality priority learning targets.

Second, you will need to make decisions about ***When to Teach*.** Use information in the *When to Teach* section of the Practice Guide to:

- Examine your classroom activities and ensure they are high-quality activities that support the engagement of all children.
- Develop an embedded instruction activity matrix by identifying when and how many embedded learning opportunities to provide in your daily schedule.

Third, you will need to make decisions about ***How to Teach*.** Use information in the *How to Teach* section of the Practice Guide to:

- Learn about intentional and systematic instructional procedures and complete learning trials.
- Plan how you will provide embedded learning opportunities that are complete learning trials.

Finally, you will need to make decisions about ***How to Evaluate*.** Use information in the *How to Evaluate* section of the Practice Guide to:

- Think about how you will collect and analyze data on embedded instruction implementation and child progress to inform instructional decisions.

Getting Started: Tips for Success

Whether embedded instruction is a new approach for you or something you have been doing for years, we recommend the following tips to ensure sufficient, intentional, and systematic instruction within and across everyday activities, routines, and transitions to maximize young children's learning. When you begin coaching, you will have additional supports to help implement the embedded instruction teaching practices.

- ❖ Know the key features of embedded instruction.
- ❖ Examine your instructional practices using the *Teacher Strengths and Needs Assessment* to identify if and when you are already using embedded instruction teaching practices.
- ❖ Examine your instructional practices to identify which embedded instruction teaching practices you are not currently using.
- ❖ Consider how to adjust your instructional practices to include all of the embedded instruction teaching practices.
- ❖ Create an *Action Plan* to support your implementation of embedded instruction teaching practices.
- ❖ Talk to your team about your *Action Plan*. Include the team in planning, implementing, and evaluating the plan.
- ❖ Systematically introduce aspects of embedded instruction in your classroom.
- ❖ Monitor and evaluate how changes to your instructional practice are affecting you, the children, and your team.
- ❖ Seek out resources and support as needed. Share your experiences with colleagues at the professional learning community meetings.
- ❖ Celebrate your successes and learn from your experiences!

Embedded Instruction for Early Learning
Tools for Teachers

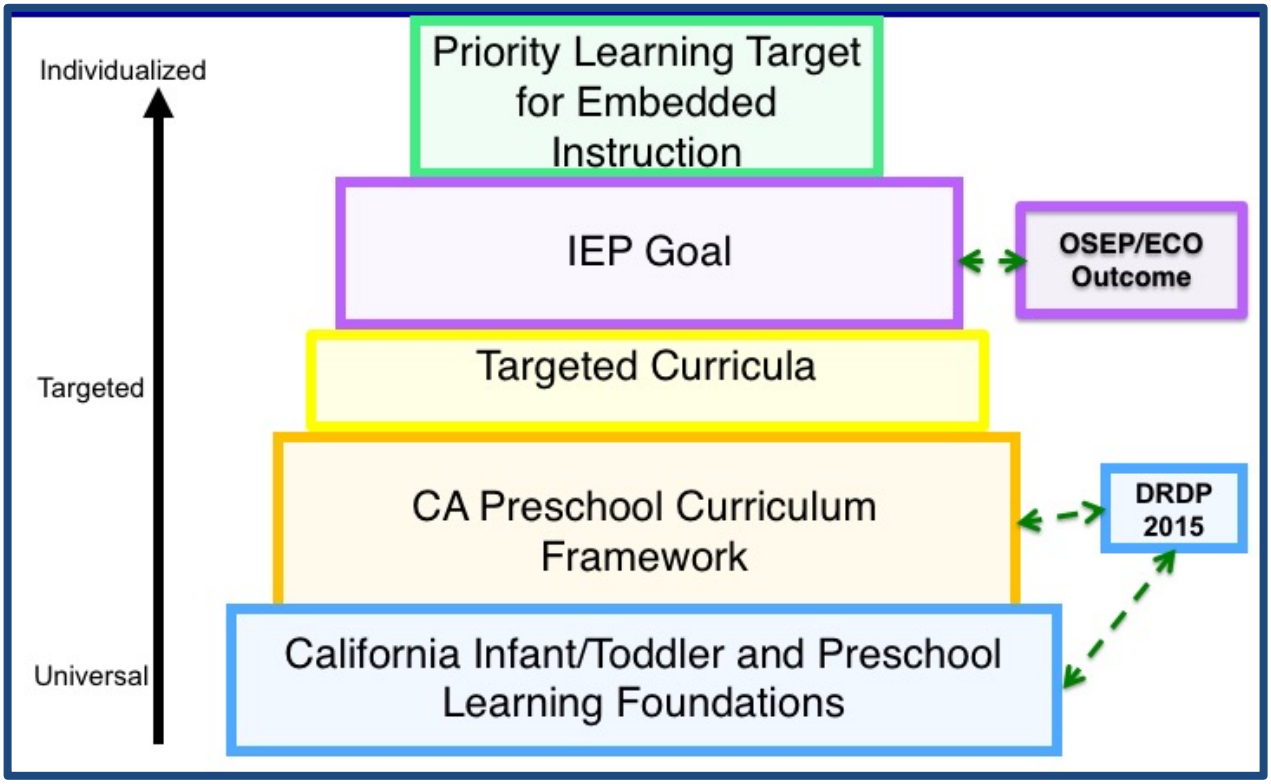
What to Teach

Teaching Practices

1. Identify and align target skills.
2. Write high-quality priority learning targets.

Strengthening the Link between the Early Learning Foundations, General and Targeted Curricula, IEP Goals, and Priority Learning Targets

Children experience many activities, routines, and transitions across home, community, and school contexts every day. Embedded instruction uses these everyday experiences as meaningful contexts to teach target skills to children. To do this most effectively, teachers, other team members, and families consider ***what the child knows or can do*** and ***what the child needs to learn or do to participate meaningfully*** in these naturally occurring activities, routines, and transitions. This process is used to write priority learning targets that are aligned with early learning foundations, general and targeted curricula, and the child's IEP goals.



What all children should know or what they should do is often reflected in early learning foundations and early childhood curricula. What all children need to learn to participate meaningfully in everyday activities, routines, and transitions informs the development of individualized goals or priority learning targets for children with special learning needs.

Let's Walk Through this Process

Step 1: Consider what all young children need to know or be able to do related to the area of development you want to target (e.g., communication, social emotional, pre-academic). Your state has early learning foundations that reflect this information for infants, toddlers, and preschool-aged children.

Examine early learning foundations in the area of development you want to target

Foundations in Language and Literacy >

Language Use and Conventions

Step 2: Your state uses the *California Preschool Curriculum Framework* and your school may also be using a commercial preschool curriculum. Use early learning foundations to identify how content from the curriculum aligns with what all children need to know and be able to do.

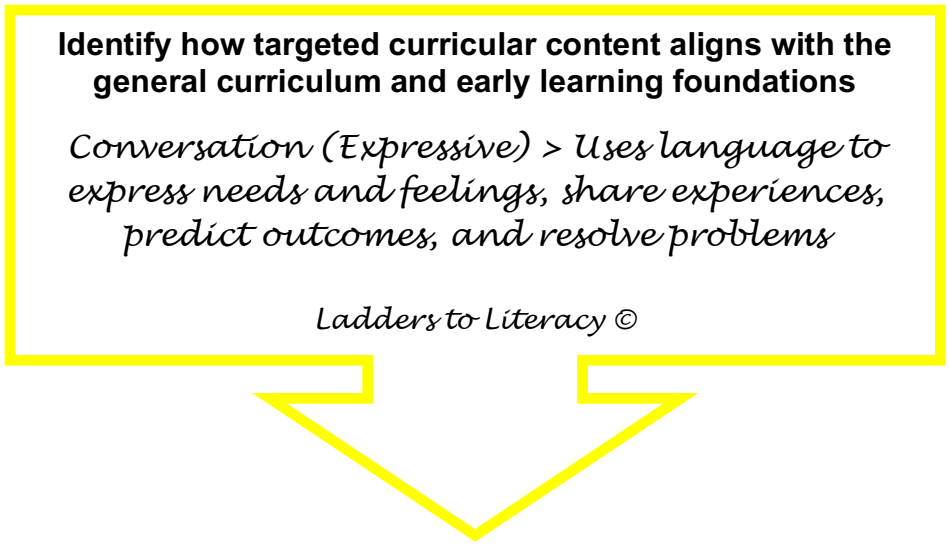
Analyze alignment between early learning foundations and general preschool curriculum content

Foundations in Language and Literacy >

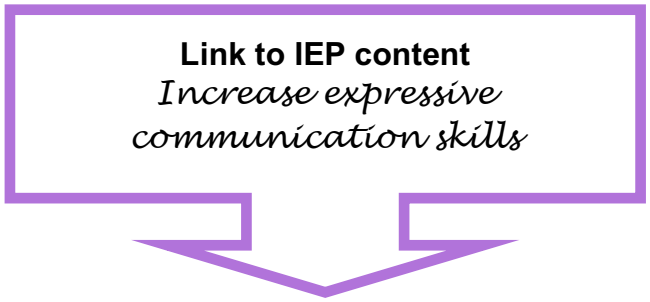
Language Use and Conventions

Use language to communicate with others in both familiar and unfamiliar social situations for a variety of basic and advanced purposes, including reasoning, predicting, problem solving, and seeking new information.

Step 3: If you are using a targeted curriculum, identify how targeted curricular content aligns with the general curricular content and early learning foundations.



Step 4: Review the child's individualized educational program (IEP) to identify the child's strengths and needs identified by the team. Identify how curricular content individualized for a child aligns with or links to the general or targeted curricular content and the early learning foundations.

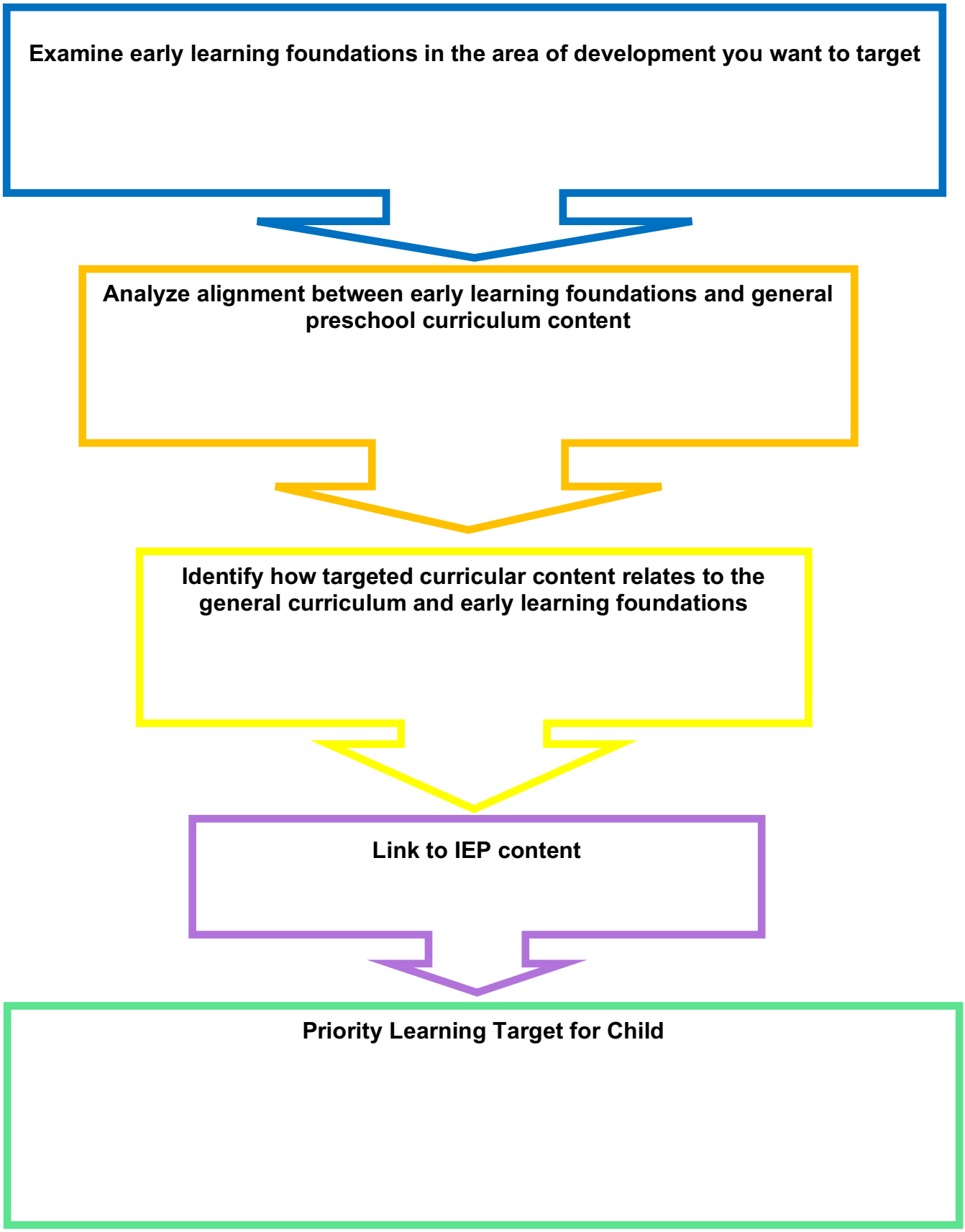


Step 5: Consider steps 1 through 4 above and write an observable and measurable, developmentally appropriate, functional and aligned, and generative priority learning target for the child that aligns or links to classroom curricular content and the early learning foundations.

Priority Learning Target for Child

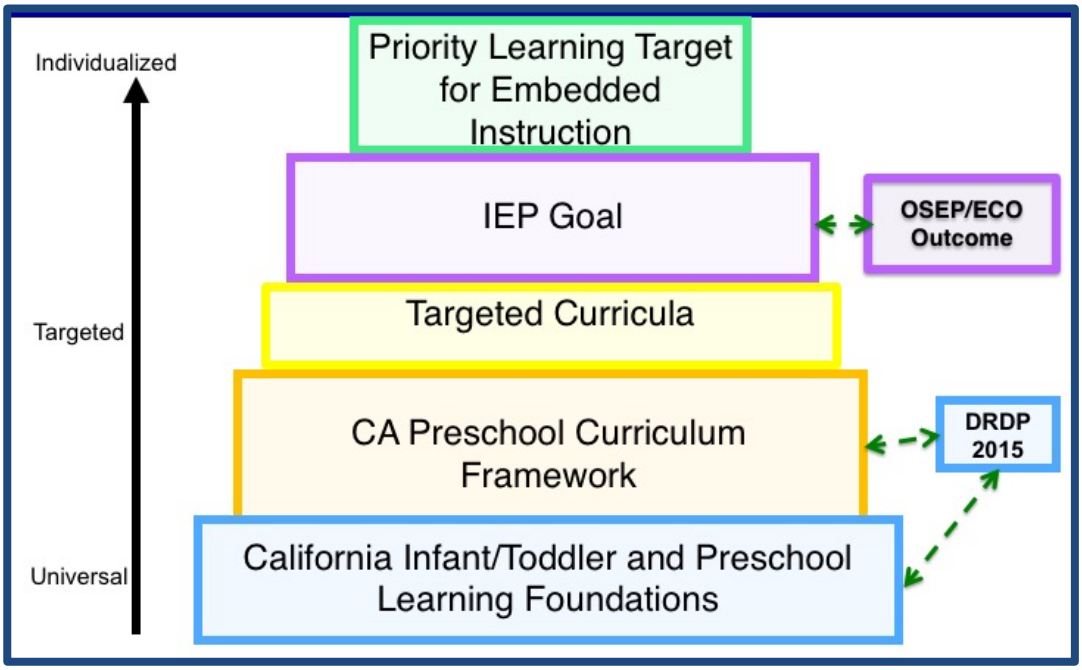
The child will use 2-3 word phrases independently to request objects with at least 2 adults and 2 peers across a variety of classroom activities each day for 5 consecutive days.

Give It a Try



Identifying Target Skills: Breaking Down IEP Goals

A child's individualized education program (IEP) specifies the goals the team wants the child to learn. The child's IEP goals should be aligned with the general preschool curriculum as well as early learning foundations in your state. States sometimes refer to their early learning foundations as standards or benchmarks that articulate what the state has prioritized for all young children to learn. The state measures children's learning and development using the Desired Results Developmental Profile or DRDP(2015) (CDE 2016). The state also measures the progress children make on their IEP goals to report child outcomes to the Office of Special Education Programs (OSEP) at the national level.

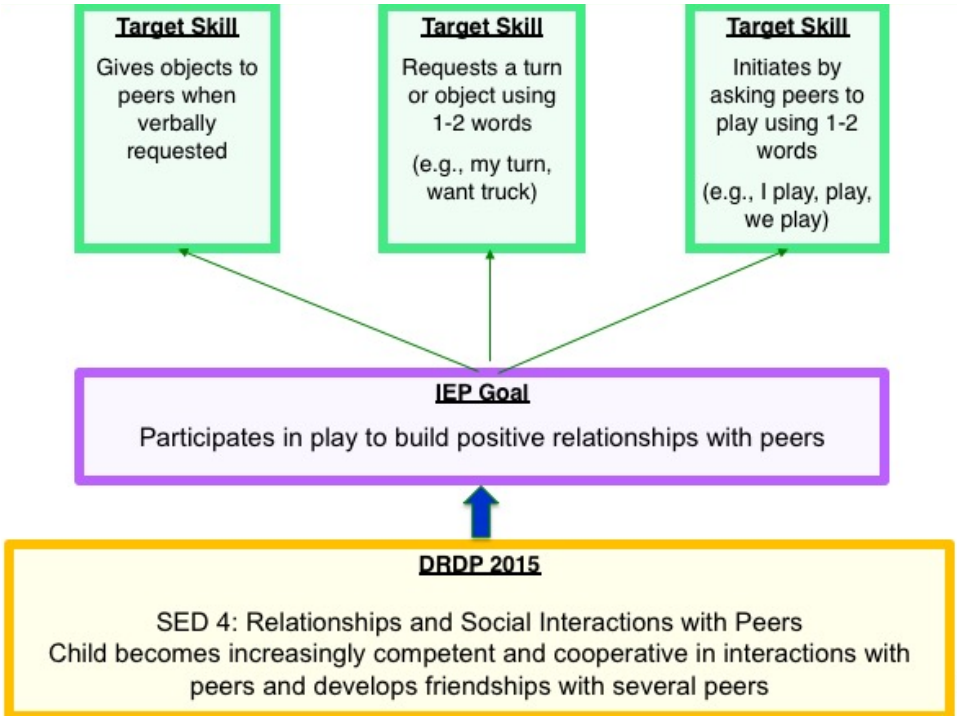


It is important to translate IEP goals into priority learning targets to inform everyday instruction. To do this, you must first identify an appropriate target skill for the child. A **target skill** is a skill or behavior that is important for the child to learn and that is one or two steps ahead of what the child can currently do. IEP goals, of course, are annual goals. Consequently, they are big, may contain many parts, and presume that the child must attain a number of intermediate goals (or objectives) in order to accomplish the big annual goal.

To get from annual IEP goals and objectives to **target skills** that are appropriate for everyday priority learning targets, you will need to:

- Break goals down into smaller objectives or steps
- Identify the necessary prerequisite behaviors (and teach those as needed)
- Sequence the steps for instruction

An example of a sequence of target skills that might lead to achieving an IEP goal aligned with the general curriculum and early learning foundations is provided below.



Breaking down IEP goals in this way can be accomplished by task analysis or logical analysis.

In a task analysis, you:

- Specify the long-term goal and look for related resources
- Determine the entry point
- Determine the steps to achieve the goal by:
  - Doing the task yourself, or
  - Watching someone else do the task
- Eliminate unnecessary or redundant steps
- Sequence the steps for instruction
- Confirm that the child can perform prerequisite skills (or teach them to the child)

The task analysis approach works well for physical or motor goals such as walking across the room, pulling up pants, or painting with a paintbrush.

Task analysis does **not** work as well for goals related to learning a concept or developing social or language skills. For these types of skills, it might be helpful to do a logical analysis.

In a logical analysis, you:

- Specify the long-term goal and look for related resources
- Determine the entry point
- Determine the steps to achieve the goal, by:
    - Reviewing the usual developmental sequence
    - Reviewing available instructional sequences from published curricula, etc.
    - "Thinking through" the goal and determining the component steps
- Sequence the steps for instruction
- Confirm that the child can perform prerequisite skills (or teach them to the child)

Instructional sequences are less absolute for social or language skills. Many skills can be taught concurrently. The child's performance (i.e., ongoing progress monitoring) and your own teaching experience are useful guides. As you are targeting systematic instruction for one aspect of the larger IEP goal the child might acquire other related skills. It is important to make data-informed decisions about when to move to the next step and what the next step should be based on the child's phase of learning.

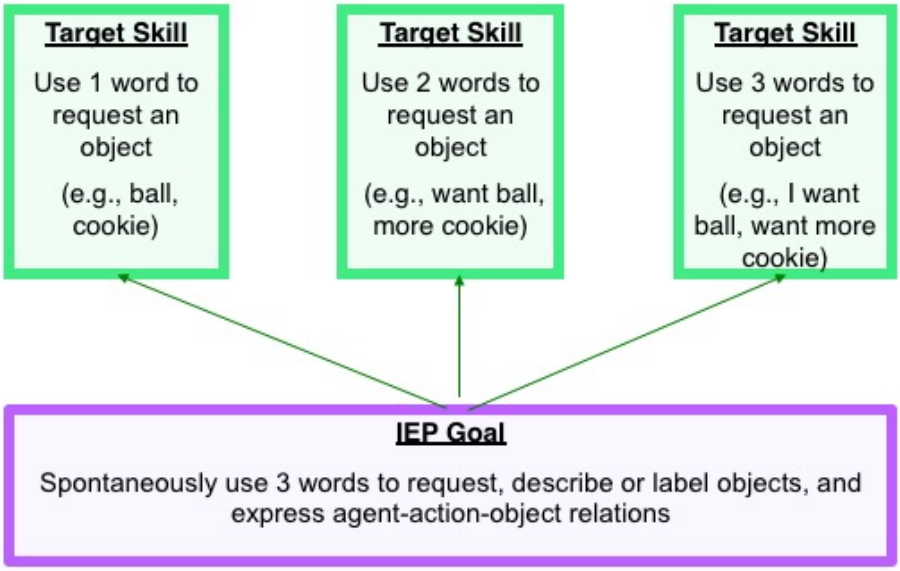
Examples of Different Ways to Break Down Goals

There are different ways you might think about breaking down goals to identify priority learning targets. You might:

- Break it down by smaller amounts
- Break it down by providing and fading additional help
- Break it down by logical order

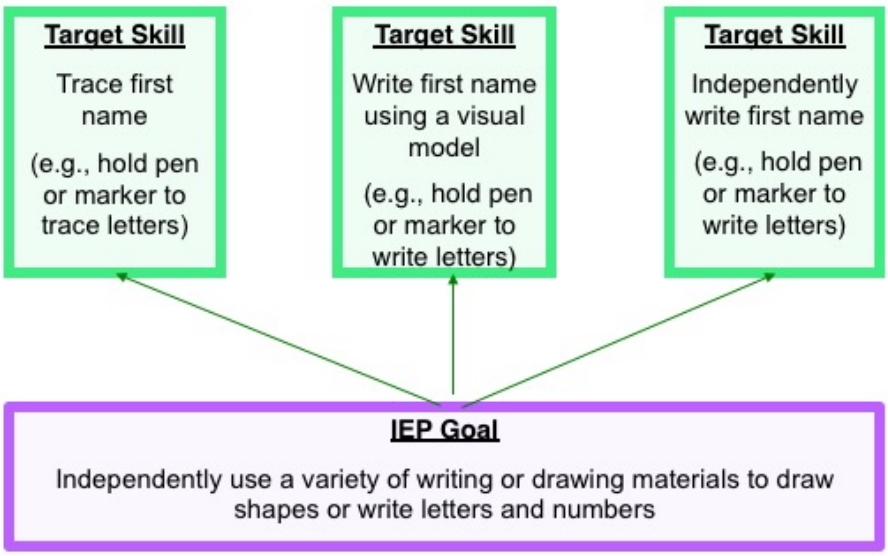
The strategy you use to break down the IEP goal will depend on the type of skill addressed. For example, a goal related to expanding expressive vocabulary might be broken down by smaller parts (e.g., phrases of increasingly more words). In contrast, a goal related to a pre-academic skill might be broken down by logical order (e.g., receptive demonstration before expressive demonstration).

Break it Down by Smaller Amounts



In the example above, the teacher has broken down an IEP goal related to functional communication. The first target skill (i.e., entry point) is using 1 word to request an object and was determined based on the child's skill level when the teacher began planning for embedded instruction. As the child meets the criteria, the teacher has planned to increase the number of words she will specify when she writes her priority learning target. Focusing on these target skills will help the child make progress toward the IEP goal of using 3 words to request, describe or label objects, and express agent-action-object relations.

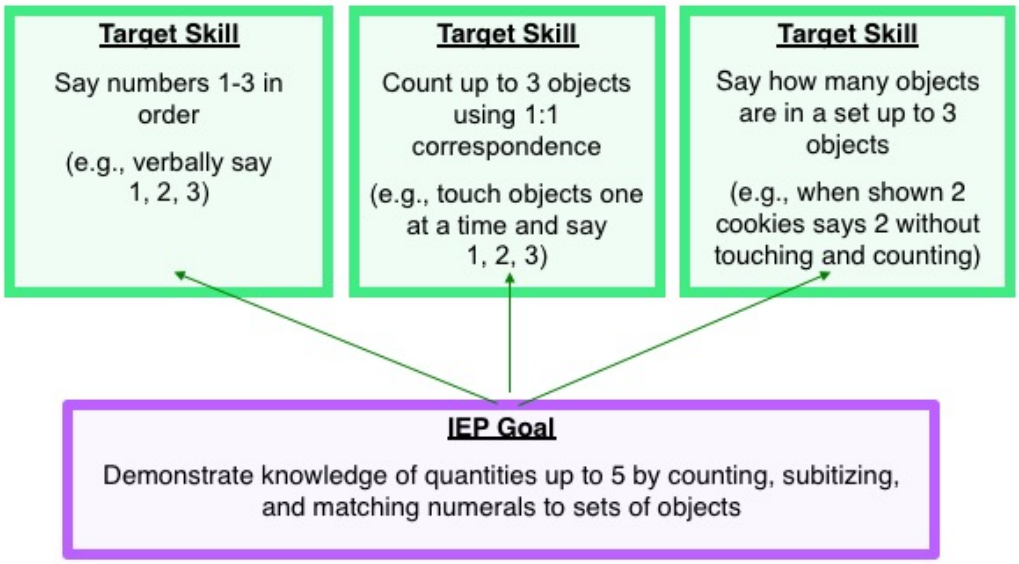
Break it Down by Providing and Fading Additional Help



In this example, the teacher has broken down an IEP goal focused on using a variety of writing or drawing materials to draw shapes or write letters and numbers. The teacher has identified 3 target skills that focus on helping the child write his name. She knows

he will need some help to get started and has planned to focus on tracing first. Then, she will fade her support to providing only a visual model of the child's first name. Finally, she will remove the visual model and work on teaching the child to write his first name independently. Breaking down the IEP goal in this way gives the child the support he needs to be successful and learn the formation of the letters in his name, but also allows him to gain more independence as he acquires writing skills.

Break it Down by Logical Order



In this example, the teacher has broken down an IEP goal focused on math skills. The teacher used the CA Preschool Learning Foundations and her observations of the child's use of math skills related to number sense in the classroom to break down the IEP goal by logical order (i.e., logical analysis). The entry point is reciting numbers 1-3 in order. The teacher has planned to increase the complexity of skills related to number sense over time to help the child make progress toward the IEP goal of counting sets of objects up to 5 using 1:1 correspondence.

Give It a Try

Use the *Breaking Down the IEP Goal* form in the Appendix to practice breaking down an IEP goal for one of the children in your classroom using the steps below:

- Decide how you will break down the goal (e.g., task analysis or logical analysis)
- Consider the child's current skill level and determine the entry point (e.g., the first target skill)
- Sequence the steps for instruction by writing down at least 2 additional target skills that will help the child make progress toward the annual IEP goal

Identifying Target Skills: Activity-Focused Assessment

Activity-focused assessments can help you identify appropriate target skills based on the child's strengths and needs. Activity-focused assessments are important because they provide information about children's skills in ongoing everyday activities, routines, transitions and different environments. There are two levels of activity-focused assessment: activity analysis and child-focused activity analysis.

Activity Analysis

Activity analysis involves examining activities with respect to **all** children. This type of analysis helps us think about the characteristics, expectations, and learning opportunities available in the activity for all children.

Activity Analysis Questions to Consider:

- What is the ongoing activity?
- What are the activity characteristics?
    - Whole group, small group, or individual
    - Structured → Unstructured
    - Teacher-directed → Child-initiated
    - Active → Passive
    - Novel → Routine
    - Social → Materials oriented
- What do **all** children need to know or be able to do to be part of the activity?

Child-Focused Activity Analysis

The second level of activity-focused assessment is a child-focused activity analysis. This involves observing an **individual child** while he or she is engaged in an activity. It is important to consider what skills the child might need to support or enhance his or her engagement, independence, or interactions in the activity. Child-focused activity analysis provides authentic information about a child's skills in ongoing activities, routines, and transitions. When you conduct a child-focused activity analysis, you will observe the child's strengths and needs within the activity and use this information to you help you identify and write priority learning targets.

Child-Focused Activity Analysis Questions to Consider:

- What is the ongoing activity?
- What is the individual child doing in the activity?
    - Which behaviors observed are strengths?

- Which behaviors observed indicate a need for support?

- What does the individual child need to know or be able to do to enhance his or her engagement, independence, or interaction with adults or peers during the activity?

Give It a Try

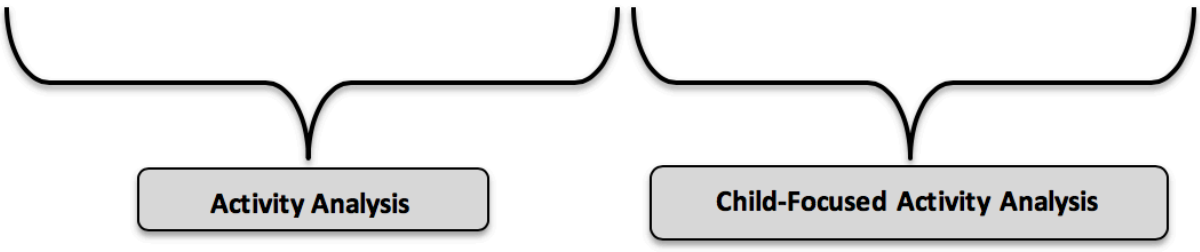
Use the *Activity-Focused Assessment* form in the Appendix to help you do an activity-focused assessment for a child in your classroom. This form has spaces for you to include 3 different activities. Write the name of each activity in the first column. First analyze the characteristics, expectations, and learning opportunities of each activity for **all** children. Then do a child-focused activity analysis for an **individual child**.

Embedded Instruction for Early Learning

Activity-Focused Assessment

Teacher ID: _____ Child ID: _____ Date: _____

Activity Analysis			Child-Focused Activity Analysis	
Activity	Activity Characteristics	Activity Expectations	Child Strengths	Skills/Behaviors To Target for Instruction



Writing High-Quality Priority Learning Targets: Behaviors or Skills for Embedded Instruction

Almost any priority learning target can be embedded into ongoing classroom activities, routines, and transitions. However, over the years, we have identified a few categories of skills that might require more than an embedded instruction approach. Some of these categories include:

Entrée or foundational skills:

Some children have difficulty learning skills that are foundational to learning other important skills. Examples might be basic imitation skills, following simple instructions, and basic functional play skills. If a child in your preschool classroom is not proficient in such basic skills, it may be necessary to provide instruction in a controlled environment where you can use very precise instructional strategies and use very consistent consequences. It is likely a child who is not yet proficient in these basic skills will need lots and lots of practice.

Skills that are usually performed in private:

Some skills are naturally done in relative privacy such as dressing, grooming, or toileting. When a child needs instruction in these skills, you will want to provide that instruction during the usual routine as much as possible but, again, you may need to plan to provide lots of practice opportunities in a somewhat artificial way so that the child actually learns to do the skill.

Adaptive skills that are unique to the child's needs:

Some individual target skills are unique to the child. For example, a child with mobility needs might be learning how to use a walker, standing board, or wheelchair. A child with communication needs might be learning to use a voice-output device or other AAC system. In order for the child to acquire the skill, it may need to be taught in a non-embedded way. Once the child has some basic ability with the skill, further learning and practice should be embedded within activities, routines, and transitions.

Note: For any of these categories of skills, the aim is for the child to perform the skills in typical activities and contexts. Although the child may need additional assistance or instruction in order to acquire the skill that is best learned (at the acquisition stage) in a more controlled setting, the skill should be embedded into meaningful and natural opportunities as soon as possible.

Different Categories of Behaviors

Skills or behaviors often are categorized into developmental domains (e.g., language and literacy, social-emotional, cognitive). In embedded instruction, it is better to think about priority learning target skills or behaviors in a different way, using one of the following four categories:

- **Discrete Behaviors**—single responses of relatively short duration (e.g., name a color, count objects, name objects);
- **Response Class Behaviors**— functions that can be fulfilled with a variety of behaviors (e.g., make a request, follow directions, imitate peer);
- **Chains of Behavior**— sequences of behaviors which, when combined, form a complex skill (e.g., washing hands, completing steps in morning arrival routine); and
- **Dispositions**— patterns of behavior that are generalizable across settings and time (e.g., being curious, being flexible).

When you are first writing priority learning targets for embedded instruction, we recommend you focus on discrete behaviors or behaviors that are considered a response class.

Source: Wolery, Mark, and Mary Louise Hemmeter. "Classroom instruction: Background, assumptions, and challenges." *Journal of Early Intervention* 33, no. 4 (2011): 371-380.

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

Components of High-Quality Priority Learning Targets

Writing high-quality priority learning targets is an embedded instruction teaching practice. The priority learning target includes information about what skill or behavior to teach the child, when to teach a skill or behavior, how to the teach the skill or behavior, and how to decide when the child is ready to move on to a new skill or behavior.

Learner **Behavior** ▪ *Observable (specific action) and Measurable* ▪ *Developmentally appropriate* ▪ *Functional and aligned* ▪ *Generative* **Conditions** **Activities** **Criterion**	Mia will name colors of objects (i.e., red, blue, green, and yellow) when asked by an adult or peer during a variety of classroom activities; identifying each color correctly twice a day for 3 consecutive days.

The learner is the child for whom the priority learning target is written.

The behavior is a skill or behavior that is one or two steps ahead of what the child can currently do and is important for the child to learn. When writing priority learning targets, it is important to include exemplars of the behavior, which illustrate what the behavior will look or sound like. Examples include:

- Use 1-2 words to greet adults and peers (e.g., Good morning, hello)
- Move objects or self in relation to another object or location (e.g. put fork *on* napkin, put backpack *in* cubby)
- Give an object to a peer (e.g., give a requested toy, give an object needed for a peer to have a turn in a game)
- Use an adapted writing tool to make markings (e.g., lines, circles)
- Count up to 5 objects using one-to-one correspondence (e.g., count spoons as they are being passed out at lunch, count the number of blocks in a tower built at centers)

When we think about writing the behavior statement in the learning target, it is important to consider the child's phase of learning:

- **Acquisition-** Learning a new skill
- **Fluency-** Gaining the ability to perform a skill in a continuous or fluid way
- **Generalization-** Using learned skills or behaviors across different settings, people, times, activities, and materials
- **Maintenance-** Using the same skill over time
- **Adaptation-** Using elements of previously learned skills that can be adapted to new demands and locations

Finally, we think about the 5 behavior statement quality indicators, which were described in the *Introduction to Writing Priority Learning Targets* online course and in the Embedded Instruction for Early Learning workshop.

- Specific Action
- Observable and Measurable
- Developmentally Appropriate
- Functional and Aligned
- Generative

The conditions in the priority learning target focus on supports the child needs to do the skill or behavior. Condition statements can include:

- People who will help the child do the skill (e.g., a peer or adult)
- Materials that will help the child do the skill (e.g., adapted equipment, visuals)
- A level of support (e.g., following a verbal model)

Activities refer to when the child might be expected or might need to use the skill or behavior (e.g., snack, centers, arrival). These should be the activities that you have determined through child-focused activity analysis are natural or logical activities for embedded instruction.

A criterion statement focuses on information you will use to say the child can do the skill or behavior. A good way to think about framing a criterion statement is "I will know [child] can do this when…." Criterion statements can include:

- Level of performance (e.g., drink from a cup without spilling liquid) or how much (e.g., 4 times)
- How often a skill is demonstrated (every day)

- How long the skill is performed (5 minutes)
- Combinations of these (e.g., 4 times a day every day for 5 weeks)

Let's Look at an Example

Priority learning targets are often not written clearly or are missing components necessary for embedded instruction. High-quality priority learning targets help teachers, parents, and your team understand what, where, and how to implement embedded instruction, as well as how to evaluate child progress.

Let's look at an example of a priority learning target that is **missing key components**:

> Alphonso will identify his first name.

This priority learning target tells us who the learner is and includes a behavior statement, but it is missing conditions, activities, and a criterion statement. In addition, the behavior stated does not tell us a **specific action** Alphonso will perform. Identifying his first name might take different forms (e.g., pointing to his name in the classroom environment, saying his first name when asked). As it is written, we do not know how Alphonso will identify his name, so the behavior is not observable or measurable. One way we might rewrite this priority learning target is:

> Alphonso will point to or touch his name when shown a variety of names or words during circle, small group activities, or centers on 3 out of 4 opportunities each day for 4 consecutive days.

Writing the priority learning target in this way:

- Includes a **specific action** Alphonso will do (he points or touches)
- Reflects a response (point to or touch) that is useful and portable across settings
- Describes the conditions under which the skill should occur (when shown a variety of names or words, independently)
- Indicates when the skill can be embedded across activities (circle, small group activities, centers)
- Specifies the skill in a way that reflects it can be used in a variety of natural instructional contexts
- Explains the skill, so that it can be easily observed and measured (point or touch rather than "identify")
- Describes the criteria for successfully learning the skill (3 out of 4 opportunities each day for 4 consecutive days)

Example Priority Learning Targets

Learner
Behavior
- *Observable (specific action) and Measurable*
- *Developmentally appropriate*
- *Functional and aligned*
- *Generative*

Conditions
Activities
Criterion

Social Skills Receptive Language	Matthew will give an item to a peer (e.g., give a dice to roll during a board game, give a ball to shoot at a basketball hoop) following a peer's request for the item. He will do this during a game or structured play activity in centers or outdoor play for 80% of opportunities presented across two different turn-taking activities.
Cognitive Receptive Language	Jayden will name colors (i.e., red, green, blue, yellow) when asked by a teacher or peer, during circle, centers, or art activities. He will have met this goal when he correctly names each color on 8 out of 10 opportunities presented across 2 days.
Expressive Language	Shira will independently use 1 word to request more of an object or action (e.g., more, again) during meals, centers, and recess on 6 occasions per day for 4 consecutive days.
Cognitive	Crystal will count up to 4 objects (e.g., gives each child 2 slices of apple at snack, takes four bingo chips for a bingo game) when shown a numeral 1-4 during snack, small group, and centers. She will do this correctly 8 out of 10 times per day for 1 week.
Early Literacy	George will point to, touch, or take his name (e.g., point to his name to indicate he is here, take his name card to put on the center choice board) when given two choices of names during arrival, centers, transitions, and table time on 8 occasions each day for 3 consecutive days.
Expressive Language	Kris will request an object using 2-3 words (e.g., I want ____; want ___) following a verbal cue (e.g., What do you want). He will do this during meals, circle, and recess for 80% of opportunities presented for 1 week.

Writing High-Quality Priority Learning Targets: Quality Indicators

Having priority learning targets that are observable and measurable, developmentally appropriate, functional and aligned, generative, and that can be taught in a variety of instructional contexts is very important for getting started with embedded instruction.

It is easier to embed instruction within ongoing classroom activities, routines, and transitions when priority learning targets are observable and measurable, developmentally appropriate, functional and aligned, generative, and teachable in naturally occurring contexts.

When you write priority learning targets, it is important to review them to ensure these five quality indicators are met. Guiding questions are provided below to help you decide if you have written a high-quality priority learning target.

Priority Learning Target Quality Indicators

Observable (specific action) & Measurable	The skill is **observable**, such that it can be counted, timed, or described and the **conditions** and the **criteria** for child performance are described.
Developmentally Appropriate	The skill is age-appropriate, individually appropriate, and culturally appropriate.
Functional & Aligned	Child performance of the skill is needed for **engagement** in important aspects of **daily life,** including participation, independence, and membership.
Generative	Child performance of the skill is **useful, adaptable, and portable** across settings, people, materials, and events.
Instructional Contexts	The skill can be taught in the **ongoing, naturally occurring activities, routines, and transitions** of the classroom.

Observable (specific action) and measurable priority learning targets state a behavior that can be seen or heard and thus, can be easily counted or measured. The criteria or standard should also be noted. In this way, the teacher and team will know when the child has met or achieved the priority learning target.

Can the target skill specified in the priority learning target be counted or measured? Does the priority learning target indicate when or how you will know the child has achieved the target skill?

Examples:

- Walk up sets of 3 or more stairs during daily activities
- Sign “help me” or “help please” to request assistance from peers or adults
- Name objects in book-reading activities

Non-Examples:

- Climb stairs to board the bus
- Express a need for help when challenged
- Identify objects in the classroom

Developmentally appropriate priority learning targets use materials and tasks that are appropriate for same-aged peers and are individually appropriate and culturally appropriate for the child.

Is the target skill specified in the priority learning target appropriate for same-aged peers who do not have disabilities?

Examples:

- Shake a musical instrument
- Drink from a cup with a lid or straw
- Sit up from a supine (flat on back) position with support
- Participate in games with adults and peers by giving an object or taking an object
- Count sets of up to 5 objects using one-to-one correspondence

Non-Examples:

- Shake a rattle

- Drink from a bottle
- Play peek-a-boo
- Count to 50
- Complete a worksheet with one-to-one teacher support

Functional and aligned priority learning targets are aligned with the general education curriculum and early learning foundations. The target skill specified in the priority learning target enables meaningful participation and engagement in everyday activities and leads toward more independence.

Is the target skill specified in the priority learning target functional? Does it help increase the child's participation in everyday activities? Does it help increase the child's independence? Does it increase opportunities for interaction?

Examples:

- Place objects in the classroom on top of one another
- Grasp or release objects less than 1 inch in diameter using fingertips and thumb
- Use 1 word to request an object
- Name emotions of self or others

Non-Examples:

- Stack 1 inch blue cubes
- Place raisins into a bottle with a lid 1.5 inches in diameter
- Request a block
- Identify emotions of people or characters represented in pictures

Generative priority learning targets specify target skills that can be used across activities and settings rather than skills that can only be used in one setting, with one person, with one type of material, or within the context of a single type of event.

Is the target skill specified in the priority learning target useful, adaptable, and portable across different settings, different people, different materials, and/or different events?

Examples:

- Use at least 1 word to tell whether a substance is a food or non-food substance during daily activities, routines, and transitions
- Use 1-2 words to greet familiar adults when entering a new activity or location
- Write name using a variety of materials during arrival, small groups, centers, and recess

Non-Examples:

- Distinguish food from non-food substances by pointing to the correct choice when shown a picture of food from non-food substances
- Say “hello” to greet the teacher during the morning greeting song
- Write name on a worksheet using a pencil

Instructional Contexts reflect how the target skill will be used in natural or everyday situations. For embedded instruction, it is preferable for the target skill to be used in a variety of typical activities, routines, and transitions.

Does the priority learning target indicate the target skill will be used in more than one ongoing, naturally occurring classroom activity, routine, or transition?

Examples:

- Point to or give objects of a specified color during centers and small group time
- Use 2 to 3 words to request objects (e.g., I want milk, want car, my turn) during meals, at center time, and during recess
- Use 1 to 2 words to greet peers or adults (e.g., hi, hello, good morning) during arrival time and during morning greeting

Non-Examples:

- Point to or give colored objects at the art small group activity each day
- Say the /th/ sound when presented with picture cards in speech therapy (Note: This target specifies that the child will demonstrate the behavior by making an isolated sound in speech rather than naming objects in the natural environment)
- Say “hello” to a peer during the morning greeting song

These questions can be a guide when writing priority learning targets:

Observable and Measurable

- Does the priority learning target include a specific action the child will do (i.e., target skill or behavior)?
- Can the target skill/behavior be seen or heard?
- Can I count or measure the occurrence of the target skill or behavior?
- What will the *child do*… to what *level/degree*…under what *conditions*?

Developmentally Appropriate

- Is the skill one that same-aged peers would need to participate in everyday activities, routines, and transitions?
- Is the skill in the child's "zone"—not too easy and not too hard for the child to do?

Functional and Aligned

- Does the skill improve the child's ability to *participate* in the activity?
- Does the skill increase the child's *independence* in the activity?
- Is the skill necessary for the completion of daily activities?
- Does the child *interact* with peers to complete the skill or task?

Generative

- Is it clearly stated that the skill will be used across settings, activities, people, materials, and events?
- Is the skill described in terms of a generic response?
- Is the performance of the skill *useful, adaptable,* and *portable*?

Instructional Contexts

- Can the behavior or skill be taught in a variety of naturally occurring activities, routines, and transitions?
- Does the priority learning target specify the activities, routines, or transitions where the child will demonstrate the skill?

Check It Out

- The *Priority Learning Target Planning Form* in the Appendix can help you think through writing each of the components priority learning target and then put them all together to write a high-quality priority learning target.
- The *Priority Learning Target Quality Checklist* can be used to determine whether your priority learning target includes all of the quality indicators.

Give It a Try

Write a priority learning target for a child in your class or select one of the priority learning targets for revision listed below. Use the quality indicators, guiding questions from this section, and the *Priority Learning Target Quality Checklist* in the Appendix to help you determine if the priority learning target includes all of the indicators of a high-quality priority learning target. If it does not, use the *Priority Learning Target Planning Form* from the Appendix to revise the priority learning target to include all the quality indicators.

Priority Learning Targets for revision:

- When given a model of a letter and the instruction to copy it, Joe will print a recognizable letter during art, centers, or small group work. He will do this for 5 different upper case letters. (Joe is 5 years old.)
- When presented with several like objects and asked to indicate one, Jamal will show, take, or give one object on at least 90% of the opportunities on 2 days during centers, mealtimes, or free play (for example, when given a box of crayons and told to take “just one” or when playing with blocks and asked to give “one block”). (Jamal is 3 years old.)
- Jill will use 1-2 word phrases to greet and respond to greetings from peers and adults (e.g., good morning, I’m good, thank you) during morning arrival, circle, and afternoon circle following a model from an adult or peer. Jill will use 2 greetings and 2 greeting responses following a model each day for four consecutive days.
- Jeanette will follow group directions from the teacher by responding with the appropriate verbal or motor actions during transitions and classroom routines (e.g., clean up, line up, etc.) with one visual or gestural cue on 3 out of 5 opportunities presented each day.

What to Teach: Tips for Success

High-quality priority learning targets are foundational for using embedded instruction in your classroom. Writing a high-quality priority learning target begins with identifying a target skill that is important for the child to learn and is 1 or 2 steps ahead of what the child can currently do. Once a target skill is identified, writing a priority learning target helps you, the family, and the team know exactly what the target skill looks like, what supports the child needs to do the skill, when the child will demonstrate the skill, and how you will know when the child has acquired the skill. Here are some tips for identifying target skills and writing high-quality priority learning targets:

- Identify target skills that are aligned with early learning foundations, the general preschool curriculum, targeted preschool curricula (if applicable), and the child's IEP goals.

- Do a task analysis or logical analysis to break down the child's IEP goal into a sequence of target skills that each can be learned in 2 to 4 weeks.

- Conduct an activity-focused assessment to help you determine the most appropriate target skill based on the child's strengths and needs within ongoing classroom activities, routines, and transitions.

- Choose target skills that are discrete behaviors or behaviors that are considered a response class.

- Ensure priority learning targets include a specific action the child will do.

- Use the *Priority Learning Target Planning Form* and the *Priority Learning Target Quality Checklist* to ensure your priority learning targets include the 5 key components of a high-quality priority learning target (Learner, Behavior, Conditions, Activities, Criterion Statement).

- Use the *Priority Learning Target Quality Checklist* to examine whether your priority learning targets meet the quality indicators of high-quality priority learning targets.

When to Teach

Teaching Practices

3. Use high-quality activities to provide multiple and meaningful embedded learning opportunities.
4. Develop an activity matrix to plan when and how many learning opportunities to embed within and across activities.

High-Quality Activities

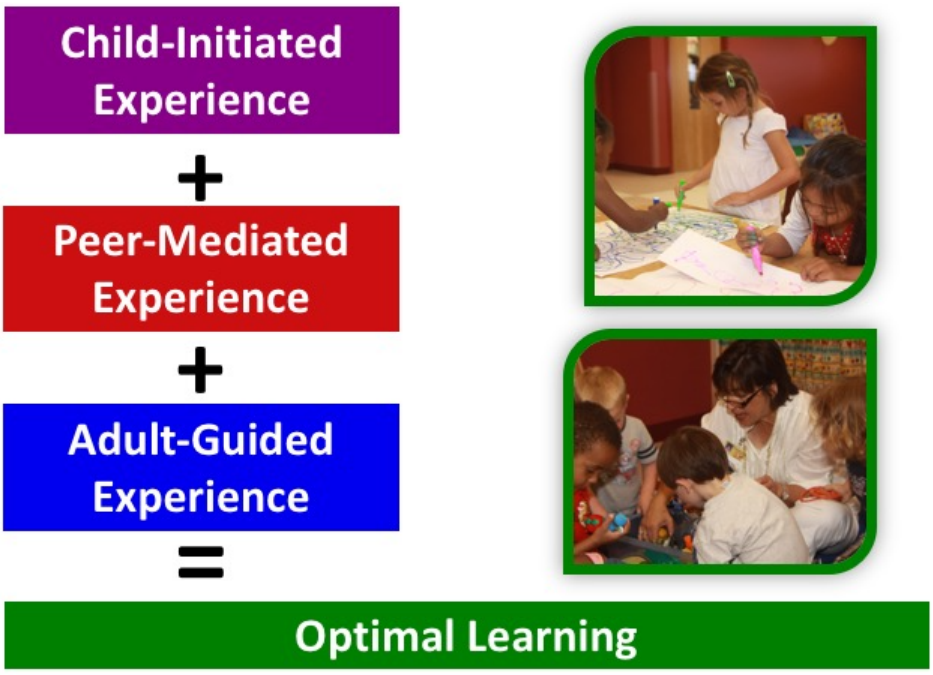
Embedded instruction involves providing **intentional** and **systematic** learning opportunities that are focused on children's **priority learning targets** and embedded **within the ongoing activities and routines of the preschool classroom**. High-quality activities, routines, and transitions that promote the engagement of all children are essential for embedded instruction.

Below are some key characteristics of high-quality activities:

- Developmentally Appropriate (i.e., age-appropriate, individually appropriate, culturally appropriate)
- Flexible and Dynamic
- Build on Children's Interests
- Provide a Balance of Experiences
- Encourage Children to Make Choices

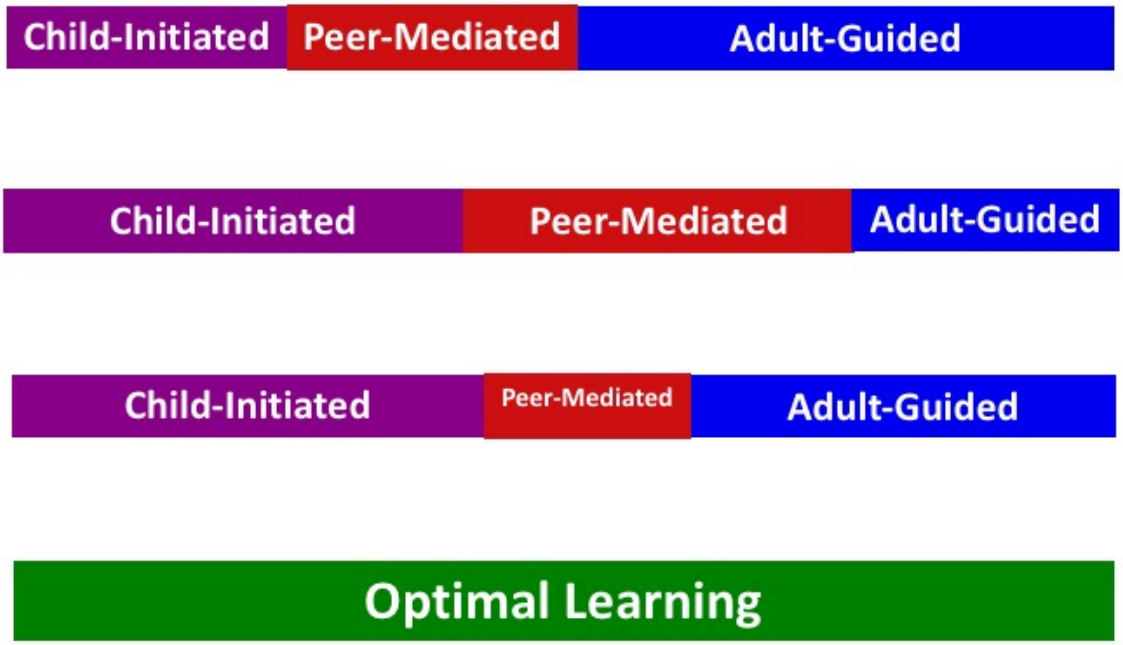
Types of Experiences and Activities

Preschoolers encounter a number of different types of experiences within the everyday activities, routines, and transitions of the preschool classroom. Research tells us children benefit from a combination of child-directed, peer-mediated, and adult-guided experiences.



Adapted from Epstein (2015).

We also know that each child's "equation" for optimal learning is different.



High-quality activities, routines, and transitions that are developmentally appropriate provide a balance of child-directed, peer-mediated, and adult-guided experiences to support the engagement of all children. This means activities, routines, and transitions build on young children's interests and allow for flexibility to support each child's unique learning equation. All activities, routines, and transitions have different degrees of structure that allow variations in child-directed, peer-mediated, and adult-guided experiences.

Consider the activities shown below. Where might they fall on the "continuum of structure?"

Teacher-Directed Activities

Teacher-directed activities are planned and led by the teacher. They are often "structured," with more limited opportunities for child choice and free expression. Teacher-directed activities include large-group, small-group, and individual activities. Although they are considered more structured, teacher-directed activities should still include all the key characteristics of high-quality activities.

Child-Directed Activities

Child-directed activities are less structured than teacher-directed activities. They provide frequent opportunities for child choice and free expression. Free choice, center time, or other activities children choose to do and complete primarily using materials of their choice are child-directed activities. Although they are considered less structured, child-directed activities should still provide opportunities for adult-guided experiences, particularly for children who need support engaging in less structured activities independently.

Routines

Routines are a special type of activity that occurs in preschool classrooms. These activities occur regularly, often involve a series of interrelated behaviors (e.g., clean up, arrival and departure, meal time, hand washing, toileting), and have a very predictable sequence. Routines are important times during the daily schedule when instruction might be embedded to support children's acquisition of target skills.

Transitions

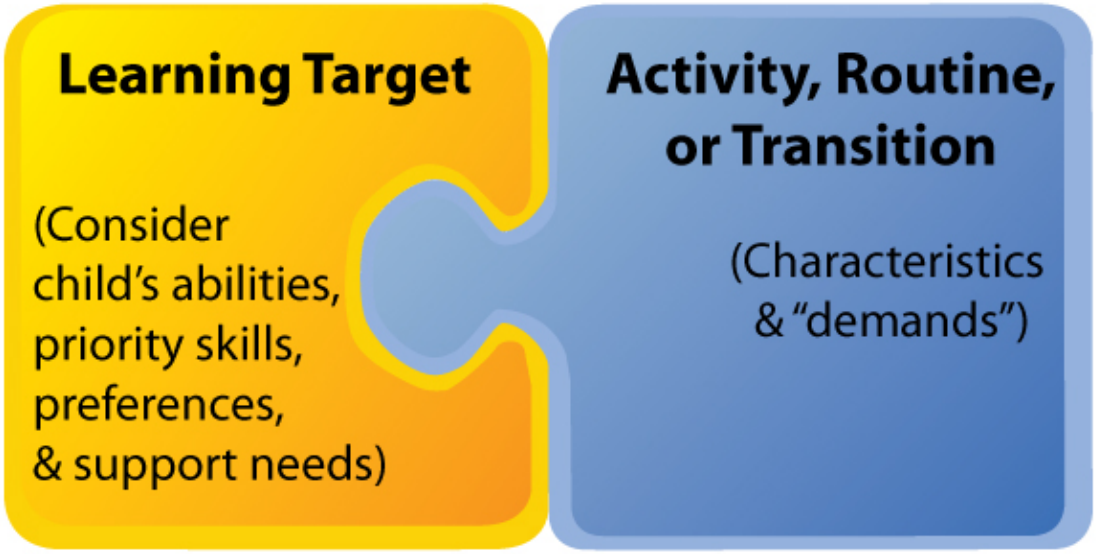
Transitions are another special type of activity that occurs in preschool classrooms and are times in which you might embed instruction on priority learning targets. Transitions involve the physical movement of children in the classroom from one activity or routine to another.

Give It a Try

Use the *Activity Planning and Implementation Checklist* in the Appendix to analyze the quality of the activities, routines, and transitions in your classroom. Write down any changes you might like to try that you think will help you provide multiple and meaningful embedded learning opportunities.

Selecting Activities, Routines, and Transitions

Selecting activities, routines, and transitions for embedding instruction on priority learning targets involves examining the "fit" between the priority learning target skill and the characteristics and expectations of an activity, routine, or transition.

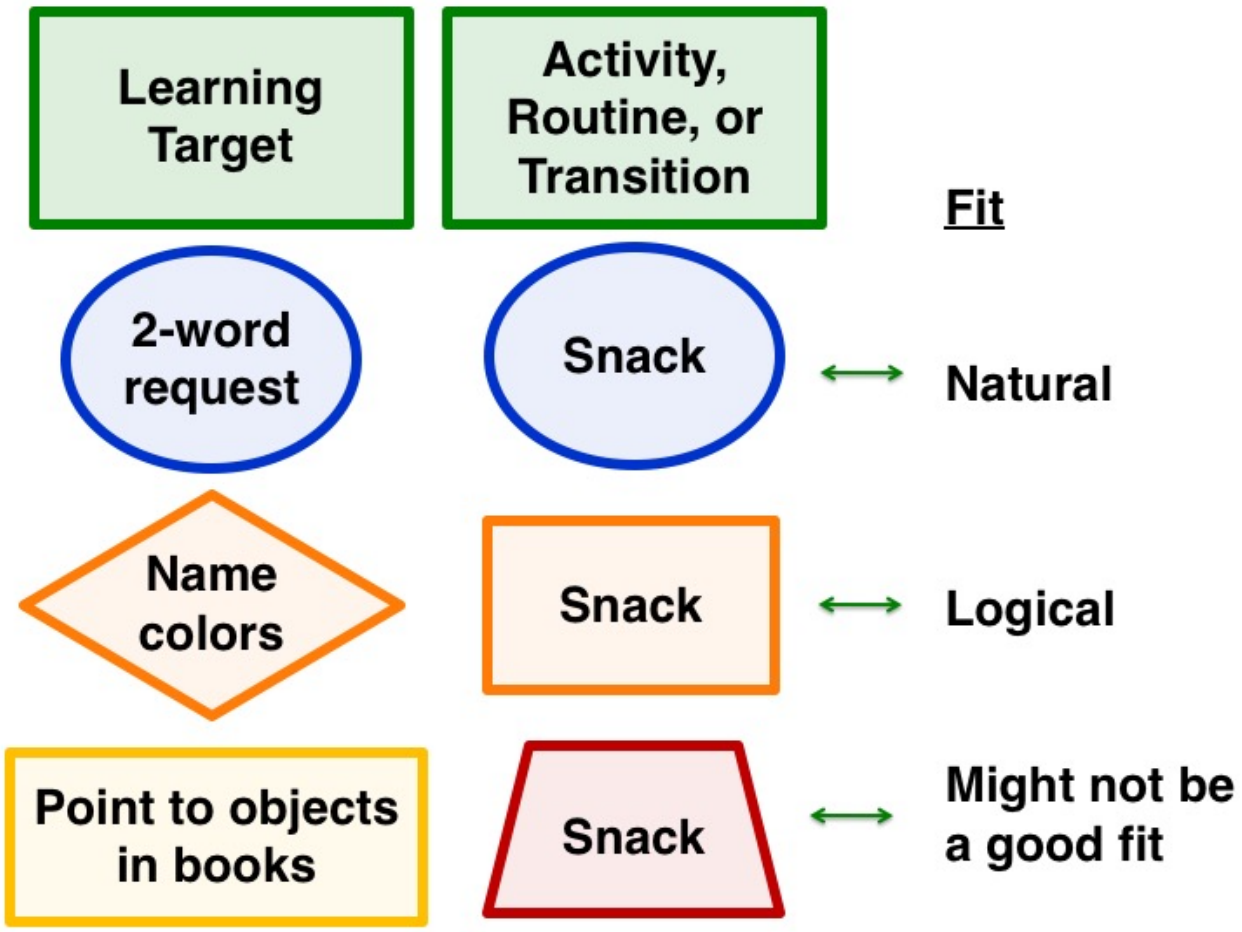


High-Quality Teaching & Embedded Instruction

The characteristics and "demands" or expectations of some activities provide natural opportunities for a child to practice some behaviors or skills. For example, snack time is a natural time for a child to practice requesting because there are multiple opportunities for all children to request food or assistance.

With a little planning, some activities might also be considered "logical" times to embed instruction on priority learning targets. This means you can arrange the environment and activity so that you can provide intentional and systematic instruction on the priority learning target without interrupting the flow of the activity or changing the activity characteristics and demands. For example, if a child is working on labeling colors, you might plan to have different colored bowls or napkins at snack time so you can ask the child what color he or she would like.

Some PLTs might include features that lend themselves to being taught in specific types of activities. For example, if a child's priority learning target is related to pointing to objects in books, snack time might not be the best time to embed instruction. Story time or when the child is playing in the library center are more natural times of day to embed instruction for this particular target.



Give It a Try

Look at your classroom schedule and one of the priority learning targets you wrote for a child in your classroom. For each activity, routine, and transition, write down if the target skill is a natural fit, logical fit, or not a good fit for embedded learning opportunities. Consider (a) the characteristics and demands of the activity with respect to the target skill, and (b) how (or if) embedded learning opportunities on the target skill will impact the characteristics and demands of the activity.

Planning Which and How Many Trials

One of the unanswered questions when it comes to the use of embedded instruction is "*How many trials do I need to provide?*" The answer to this question is, "*It depends.*" It depends on the child and his or her phase of learning.

You will need to provide enough complete learning trials for the child to make progress and learn the target skills reflected in his or her priority learning target. We know once a day is unlikely to be enough, but it is difficult to predict exactly how many trials an individual child will need to learn the skill. One of the benefits of embedding instruction is that if the trials are planned to occur during times and activities where the target skill is needed for participation in the activity, then it is possible the child may receive more trials than you originally plan!

Embedded learning opportunities can be ***distributed*** throughout the day so a child has several opportunities to practice one skill *across* multiple activities, routines, and transitions.

Embedded learning opportunities can be ***massed*** together so a child has multiple opportunities to practice the skill repeatedly *within* an activity, routine, or transition.

Embedded learning opportunities can be ***spaced*** so a child has several opportunities to practice the skill interspersed with other skills *within* an activity, routine, or transition.

Each format for delivering complete learning trials can be useful for ensuring a sufficient number of learning trials. They can be used individually or in combination. For example, you may distribute trials for a child learning to take steps independently with a walker during transitions throughout the day. It might also be appropriate to mass trials if each step is the desired behavior.

Note: The important point to keep in mind is that embedded learning opportunities should occur in a context that is meaningful for the child. In other words, they should focus on a specific target skill and should be delivered to a child in the context of activities, routines or transitions where he/she will naturally use the skill.

Distributed Trials		
Learning trials are inserted into everyday activities and routines and distributed throughout the day	Time between learning trials for the child to participate in other activities and perform other skills	Helpful to support the maintenance or generalization of a learned skill

For Example:

- Embedded learning opportunities for stacking objects could occur across activities, such as breakfast, centers, and lunch.
- Embedded learning opportunities for using 1-2 words to request objects could occur across activities, such as morning circle, centers, and small group games.

Massed Trials		
Learning trials inserted into everyday activities and delivered closely together in time	Focus on one behavior with repeated practice	Helpful when child is acquiring a skill or becoming fluent in using the skill

For Example:

- Embedded learning opportunities for taking steps would naturally be repeated within an activity. The child may repeat these behaviors without engaging in another behavior.
- Embedded learning opportunities for holding an adapted writing tool and making markings could be repeated within an activity. The child may repeat the behavior making 2-3 lines without engaging in another behavior.

Spaced Trials		
Learning trials inserted into everyday activities and pauses between trials	Practice on target behavior spaced between another behavior	Helpful when child is acquiring a skill, becoming fluent in using the skill, or support the maintenance or generalization of a learned skill

For Example:

- Embedded learning opportunities for naming colors could occur multiple times within a story reading activity, when the child names a color every few pages.
- Embedded learning opportunities for requesting an object using 2-3 words could occur multiple times within center time, but naturally the child would play with the object before requesting something new.

Developing an Activity Matrix

The **Activity Matrix** helps you plan when, where, and how many learning opportunities you will embed within the usual activities of the classroom**.** There are lots of variations of an activity matrix, but there are some essential components for any activity matrix. The most important thing about the activity matrix is that instruction is planned ahead of time, including **when** and **how many** embedded learning opportunities will be implemented on **which** priority learning targets.

Components of the Activity Matrix

- The usual schedule of activities
- The name(s) of the child or children
- The priority learning targets for which you plan to embed learning opportunities
- The number of learning opportunities you plan to provide for each priority learning target across planned activities

In the next pages of this guide, you will find information about how to develop a Classroom Activity Matrix and an Individual Child Matrix.

Example Class Activity Matrix

	Davion	Matthew	Nilah
Arrival		**Move objects or himself in relation to another object or location—2**	Greet peers—2
Circle		**Move objects or himself in relation to another object or location—1**	
Centers	Use 2-3 words to Initiate play—2 Count up to 3 objects—2	Hold marker/paintbrush and make marks on paper—6	Use both hands to pour—2 Use 2 words to request help or assistance from peer —2
Outside	Use 2-3 words to Initiate play–2	**Move objects or himself in relation to another object or location—5**	Greet peers—2
Snack	3-word phrases for requests—3 Count up to 3 objects—2	**Move objects or himself in relation to another object or location—5**	Use both hands to pour—5
Class Activity	3-word phrases for requests—3	Hold marker/paintbrush and make marks on paper—6	Follow 1-step directions—3
Free Play	Use 2-3 words to Initiate play —2 Count up to 3 objects—2 3-word phrases for request—3		Use 2 words to request help or assistance from peer —2
Departure		**Move objects or himself in relation to another object or location—2**	Follow 1-step directions—1
Transitions	Walk up and down stairs—6		Follow 1-step directions—2

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Classroom Activity Matrix

A classroom activity matrix is constructed in the following way:

- The classroom schedule of activities is written down the left column.
- The names of the children in the classroom (or at least the children who have special learning needs) are written across the top row.
- The cells or blocks (at the intersection of the row and column) are used to indicate the priority learning target skill or behavior that will be embedded within that time and the number of trials that will be embedded.
- A reminder about the instructional strategy to be used might also be included in the cells.

For planning purposes, the classroom activity matrix reminds the teacher and team of the usual activities of the day, all of the individual children's special learning needs, and the availability of adult resources. For example, on certain days the speech-language therapist might be in the classroom for an hour or on other days a volunteer might be available.

To make a classroom activity matrix, teachers and teams will need:

- The usual classroom schedule
- List of "specials" (e.g., music day, bike day, etc.)
- List of children and their current priority learning targets
- Schedules of the adults in the classroom

The teacher and team use these resources to put together the master classroom activity matrix. The goal is to provide children with sufficient embedded instruction opportunities within activities, routines, and transitions that are the best "fit" for teaching their priority learning targets.

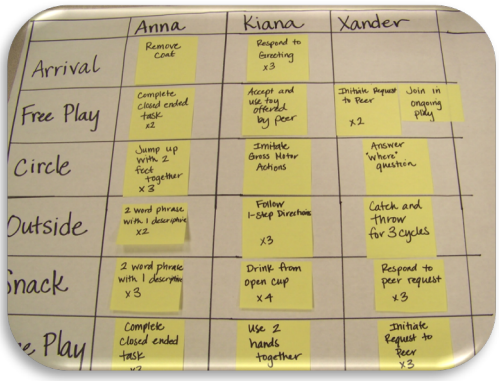
Teachers will want to think about:

- The most naturally occurring time for instruction to occur
- Availability of adults
- Child preferences
- Other children's needs

It's a juggling act! For this reason, it might be helpful to use a format that can easily be changed (such as a system with post-it notes or a whiteboard, shown on the next page).

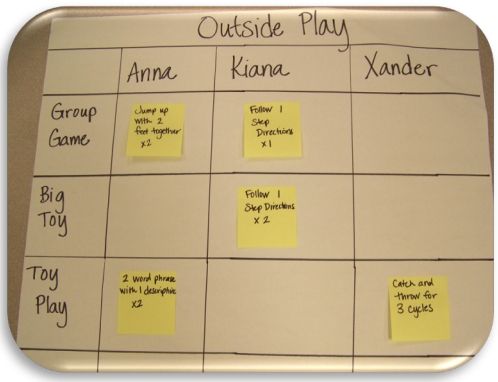
Note: When you develop the activity matrix it does not mean the teacher or other members of the child's team will never teach the target skill or behavior during unplanned activities if a natural or logical opportunity presents itself, but it does describe the minimum number of planned learning trials you believe the child will need to meet the specified criterion.

Example Class Activity Matrix



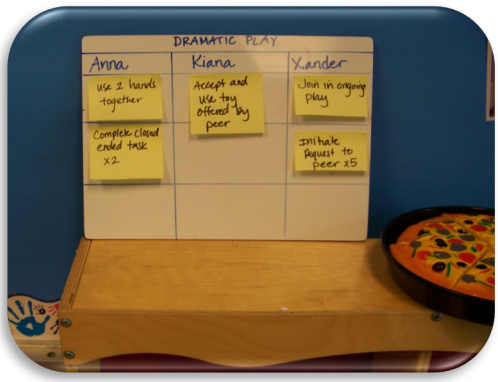
An activity matrix highlights how busy preschool classrooms really are. Teachers sometimes remark that the schedule is just too big to fit on a single piece of paper or even on a whiteboard. Many teachers have one big master schedule/activity matrix but then put more detail on smaller activity-specific matrices.

Example Activity-Specific Matrix



Many teachers have a separate activity matrix for learning centers, free choice time, or recess. This type of activity matrix has the interest areas listed in the left column and the children's names across the top row. Here's an example of what an activity matrix might look like for outdoor play.

Example Interest Center Activity Matrix



Other teachers make separate activity matrices for each center interest area. In most classrooms, children spend a considerable amount of their preschool day at these areas. It is important to plan how individual children will use these areas and how you can provide instruction when the child arrives at an interest center. This means it is important to plan what materials or toys will be available in the interest center or how it will be set up, in addition to planning for embedding complete learning trials in that area.

Individual Child Activity Matrix

An individual child activity matrix is used to plan when and how many learning trials will be implemented for each individual child's priority learning targets. The individual child matrix is often developed before the classroom matrix. In the individual child matrix, the schedule of classroom activities goes in the left column and each of the current priority learning targets for the child go in the row across the top.

The individual child matrix gives the full picture of all of the child's current priority learning targets. Right away, the team can think about how reasonable it is to presume that the child will receive planned instruction on all of the priority learning targets. This matrix also includes a row indicating the antecedent or prompt for each target skill so the team can be consistent in the way they deliver embedded learning opportunities. An individual activity matrix might also push the team to think about simpler ways to provide learning opportunities. For example, a curriculum modification (like using the child's preferred materials or adding a photographic cue) might be sufficient to support child participation and learning within an activity. These modifications can free the adults to provide more hands-on support for other priority learning targets or for other children. Laying out all of the child's priority learning targets on the individual child matrix may also encourage the team to think about prioritizing learning targets or becoming more aware of teaching prerequisite skills that can then increase the possibility that the child will learn from the typical activities.

Let's look at an example for Annie:

	Initiate play with peers using 1-2 words	Answer "who" questions using 1 word	Trace the first letter in her name using a tripod grasp	Take a turn during a group game following an adult or peer prompt "Annie's turn!"
Antecedent/Prompt	*Say - Tell your friend _____ (e.g., I play, we play, or play)*	*Ask - Who's that? OR Who is not here today?*	*Say – Trace the A OR Write A in highlighter for her to trace on her "work"*	*Say – "Annie's turn!"*
Arrival/Games	X1	X1		X2
Circle/ OT		X2	X1	
Outside	X2			X2
Snack				
Small Groups			X2	X2
Free/Choice Motor Room	X2		X1	X2
Lunch				
Toileting				
Good Byes		X1		

Individual child matrices are updated as the child makes progress on individual priority learning targets. Individual matrices can be used when putting together the Classroom Matrix as described on page 49. When moving from an activity matrix for one child to a classroom activity matrix, you may find that you need to modify the number of trials or times of day when opportunities are offered.

Note: To learn more about antecedents and prompts check out the *How to Teach* section of this guide.

Other Considerations for Developing and Using an Activity Matrix

Some other things to think about when developing and using an activity matrix:

- Write the priority learning target in a way that all members of the team will know what the behavior looks and sounds like. **Involve the team** in developing and updating the matrix. If just one person writes it, other team members may not know what's on the matrix.

- Remind therapists that using the matrix is a great way to ensure **therapy is provided in the classroom**.

- **Update it regularly**. If the matrix gets out of date, team members will get out of the habit of using it.

- Use change of color or other tricks to **draw team members' attention to the matrix**. If the matrix looks the same week after week, team members may stop looking at it. Use a new color of post-it note or use a different colored marker.

- **Align the number of trials on the activity matrix with the priority learning target activities and criterion.** Use these opportunities throughout the day to collect data on the child's progress and to determine if a sufficient number of trials are being offered.

- **Use the activity matrix to collect "Am I Doing It?" data** on whether embedded learning opportunities are being provided during planned activities and whether the number of planned embedded learning opportunities are being implemented. Check out the *How to Evaluate* section of this guide for more information.

Give It a Try

First take a look at Annie's Individual Matrix on the previous page.

- Are the activities planned for embedding instruction on her priority learning targets natural, logical, or not a good fit?
- Are there any changes you might make to this activity matrix?

Next, use the *Individual Child Activity Matrix* and the *Classroom Activity Matrix* in the Appendix to work with your team to plan for embedded learning opportunities on the priority learning target skills identified for children in your classroom. Remember to consider the characteristics and demands of the activity in relation to the child's priority learning targets and choose activities that are a natural or logical fit for embedded instruction.

When to Teach: Tips for Success

The 'When to Teach' component of embedded instruction is all about identifying natural and logical times to provide embedded learning opportunities focused on children's priority learning targets. High-quality activities that support the engagement and learning of all children are essential for making embedded instruction a natural part of your classroom. Activity matrices help you plan and share information with your team about **when** and **how many** embedded learning opportunities you will provide on **which** priority learning targets throughout the day. Here are some tips for this process:

- Use the *Activity Planning and Implementation Checklist* to determine whether your activities, routines, and transitions have the key characteristics of high-quality activities.
- Examine your daily schedule and the children's priority learning targets to find activities that are a natural or logical fit for children's target skills.
- Consider whether embedded learning opportunities for children's target skills should be distributed, massed, or spaced.
- Create a *Classroom Activity Matrix* to plan when you provide embedded learning opportunities, how many learning opportunities you will provide, and which priority learning targets you will provide embedded learning opportunities on for multiple children in the classroom.
- Create an *Individual Child Activity Matrix* to plan when and how many learning opportunities you will embed for an individual child's priority learning targets.
- Be creative! Your activity matrix should be functional for your team, so think about what you need to help you be successful as you embed learning opportunities throughout the day.

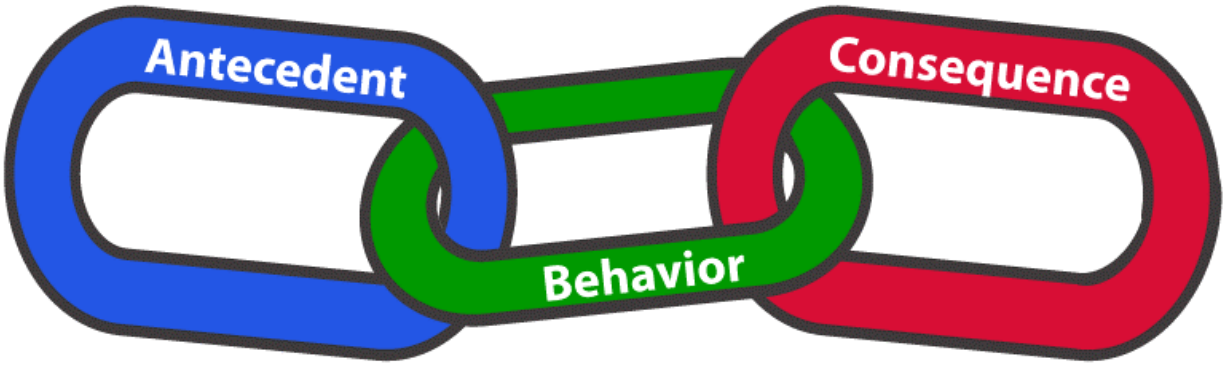
How to Teach

Teaching Practice

5. Plan and implement embedded learning opportunities as complete learning trials.

Complete Learning Trials

Complete learning trials are used to embed intentional teaching into naturally occurring activities, routines, and transitions (Barton, Bishop, and Snyder 2014). A basic complete learning trial occurs when there is a "complete" [or linked] A-B-C sequence.



One way a complete learning trial can occur is when a logically occurring or planned antecedent results in a behavior that leads to a logically occurring or planned consequence.

By logically occurring, we mean something that occurs logically in the child's environment.

By planned, we mean something that the teacher or another adult has done to encourage a behavior that would not otherwise have occurred.

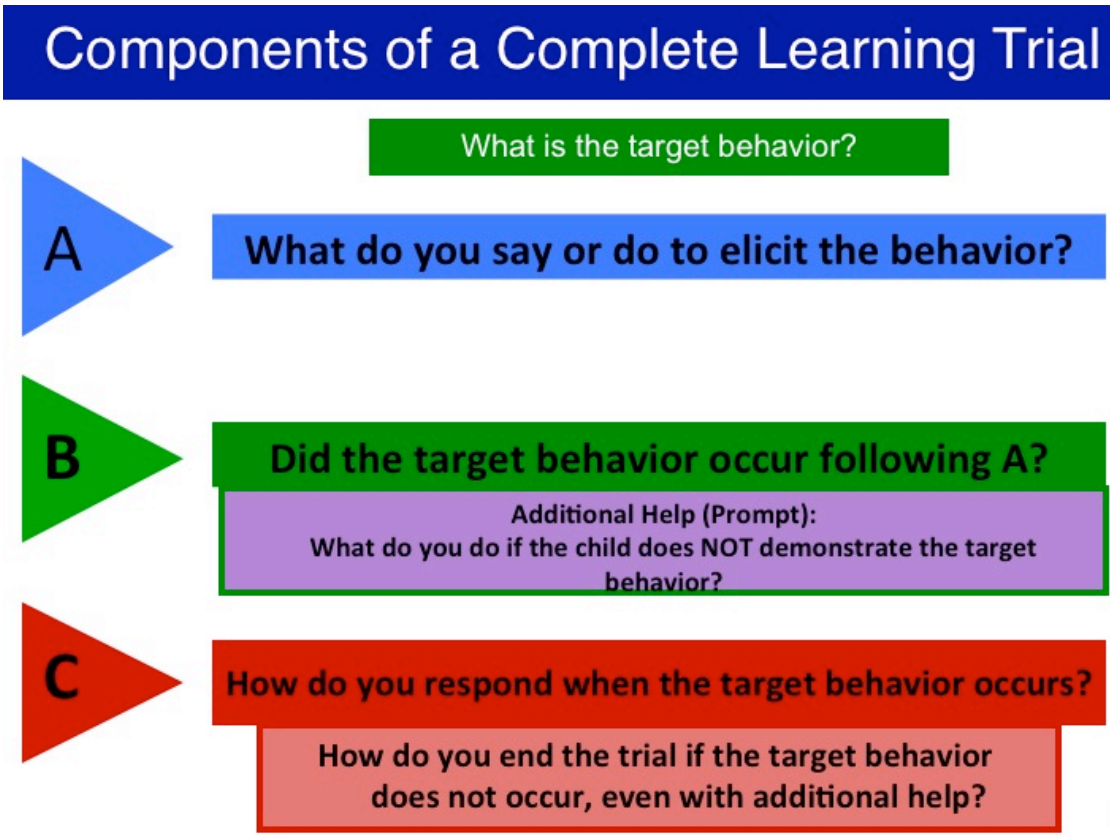
By **Antecedent,** we mean something that sets the occasion for a child's behavior. This always includes a natural cue for the behavior and might also include a prompt.

By **Behavior**, we mean something the child does following the antecedent.

By **Consequence**, we mean something that happens in the child's environment immediately following his/her behavior.

We can use complete learning trials to provide targeted, intentional, and systematic instruction on a child's priority learning targets in the ongoing activities, routines, and transitions of preschool classrooms.

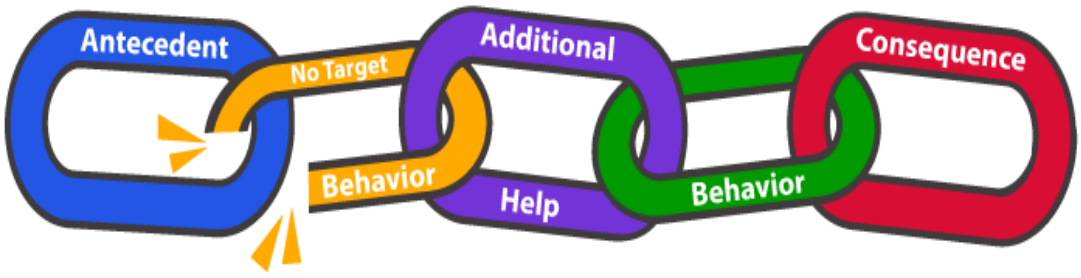
A complete learning trial will always have an Antecedent, Behavior, and Consequence (A-B-C), but it might include other components as well. A teacher might provide additional help after an incorrect behavior to make sure each trial is a complete learning trial.



On the following pages, we will take a closer look at the components of complete learning trials:

- Antecedents [Natural Cue(s) or Natural Cue(s) Plus Prompt(s)]
- Additional Help (Prompts)
- Consequences
- Feedback

Complete Learning Trial with Additional Help



Antecedents

Antecedents are environmental objects, events, or behaviors of people that set the occasion for the targeted behavior. Antecedents are 'cues' about which behaviors are appropriate or desired at particular times or in particular settings.

Antecedents signal to the child that a particular behavior should be emitted and is likely to result in a desired consequence.

The antecedent is something that lets children know that they should perform the target skill or behavior. The antecedent begins a trial for the adult and child. Antecedents always include **natural cues** to elicit the target behavior. Antecedents *might* also include **a prompt(s)** to elicit the target behavior.

Natural Cues

Natural cues are antecedents that occur in the natural environment. Examples of natural cues include:

Materials, objects, or people that are part of classroom activities. The target behavior might occur in response to materials, objects, or people that are part of classroom activities. This includes materials in the environment or preferred objects (e.g., toys, games, food, or other objects) the child is interested in obtaining or communicating about. For example:

- The child might really like to play with trucks with sirens, so the teacher places this item on the table within view, but just out of the child's reach. The child has an opportunity to ask for the preferred object.
- The target behavior might occur in response to adults or peers (people) that are part of the classroom. For example, when Davion sees his peer, he might ask "Can I play?"

Situations or events. A target behavior might occur in response to a situation or event. This could include situations in which something unexpected or unusual has occurred, or typical and routine events**,** including familiar social situations or classroom routines. For example:

- A typical event might be when a child asks for juice because she is sitting at the snack table. In this example, snack is an event.
- An unexpected or unusual situation might be when the child goes to the art center activity to draw a picture, but all the crayons are missing (i.e., the teacher "forgot" to put out the crayons). The child has an opportunity to ask the teacher for the crayons. Remember that an unexpected or unusual situation might happen as part of the preschool day or you might plan for these "unexpected" situations as part of embedded instruction.

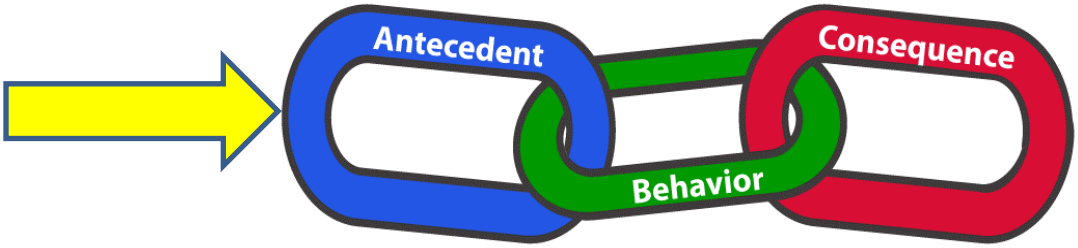
Directions or questions. A target behavior might occur in response to a direction or question. For example:

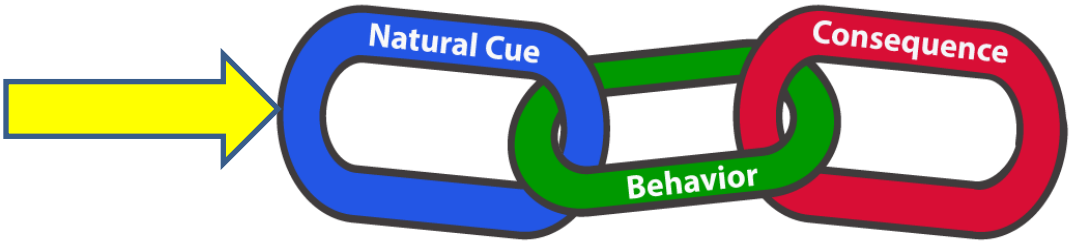
- **Verbal behaviors,** which include comments, directives, requests, or questions from either adults or other children. For example, a teacher might say "How many cars do you have?" which provides an opportunity for the child to tell how many cars he/she has.

- **Non-verbal behaviors,** which include gestures or pictures that cue the child. For example, a teacher might point to the shelf where the toys should be placed. The child might put toys on shelf.

Behavior chains or sequences of behaviors. A target behavior might occur in response to a previous behavior in a chain or sequence of behaviors. In addition to the **behavior chains or sequences of behaviors** that children put together when completing tasks like washing their hands (i.e., put soap on hands, rub hands together, rinse soap off hands) or taking a drink from a cup (i.e., grasp cup, lift to mouth, tilt cup, swallow liquid, place cup on table), children might also respond to **steps in a familiar routine**. Completing one step in a well-known routine (a consequence) might cue the next step in the routine and thus also serve as an antecedent. For example:

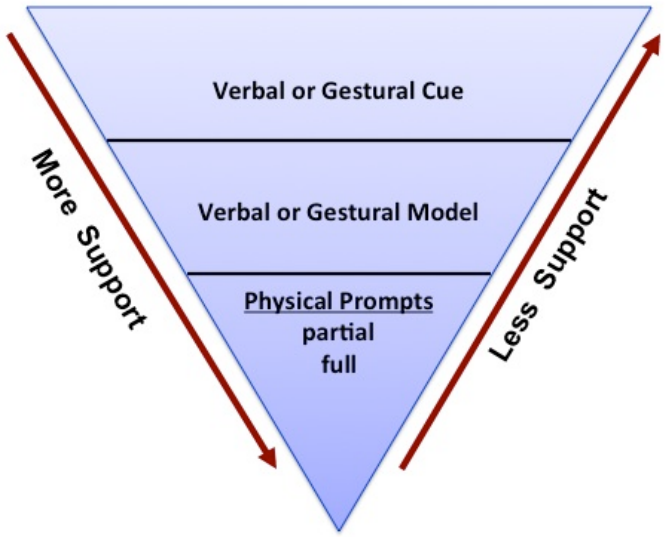
- If a child is "cued" by the water faucet (A) to turn the faucet (B), then water comes out (C). Water coming out serves as cue (A) to put hands under the water. After sufficient experience with a routine, one event or behavior might become an antecedent for the event or behavior that follows.





Prompts

Prompts can be thought of as a hierarchy ranging from the least supportive to the most supportive. Some or all levels of prompts may be needed to support a child in the process of learning or mastering a target behavior.



Examples of verbal or gestural cues:

- *Asking a question:* Asking Matthew, “Can you help me clean up the cars?” while he sorts cars and blocks onto the correct shelves during clean-up time.
- *Giving a direction*: Saying to Matthew, “Put the small cars in the basket” during clean-up time.
- *Giving a gestural cue:* Pointing to the shelf where toy cars go while Matthew is putting away cars and blocks during clean-up time.

Examples of verbal or gestural models:

- *Verbal model*: Model a 2-word phrase for Matthew to request more cars during center time by saying, “Need more cars.” (Matthew is likely to approximate this request: “More cars.”)
- *Gestural model*: Demonstrating for Matthew how to put the blocks on the shelf and the cars in the basket during clean-up time.

Examples of physical prompts:

- *Partial physical prompt:* A light touch or nudge on Matthew’s elbow to assist him to put the cars on a shelf during clean-up time.
- *Full physical prompt:* Hand-over-hand assistance given to Matthew to help him put cars in a basket during clean-up time.

Selecting Prompts

Prompts are useful when natural cues do not provide the support children need to produce target behaviors. In addition, there may be cultural considerations in selecting which prompt or prompts to use. You will want to select the prompt that is most likely to elicit the desired behavior for the particular child, but is also the least intrusive.

Verbal or gestural cues provide the least amount of support and are generally the most frequently used prompts. Providing a verbal or gestural model for a child to imitate provides a little more information for the child, making it more likely the child will produce the desired behavior (that is, if the child can imitate).

It is also important to remember that in the prompt hierarchy, physical prompts are listed in order of support provided. A full physical prompt provides more support than a partial physical prompt.

Full Physical

Partial Physical

Fading Prompts

Prompts might be necessary to elicit a desired behavior and can be part of a complete learning trial. It is important to remember that when you use prompts, you should be careful to fade them out so that the child is eventually performing the priority learning target skill independently.

When fading, prompts are gradually diminished until behaviors occur with the natural cue. This is called transferring stimulus control from the adult to a naturally occurring cue or stimulus in the environment. Through fading, prompts are gradually diminished until behaviors occur without any prompts.

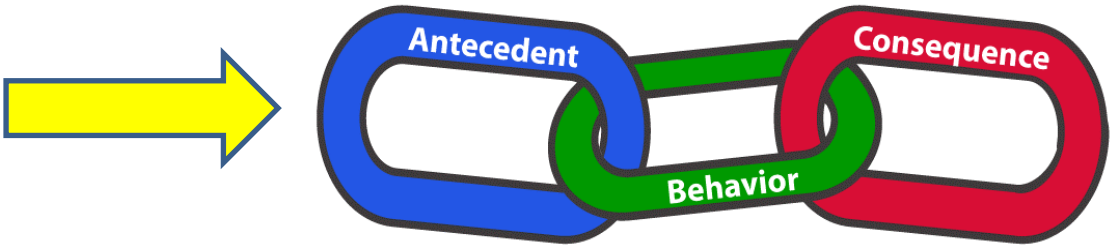
Note: The instructional strategies of least-to-most prompting and most-to-least prompting are strategies for fading prompts, as they both lead to the child producing the desired behavior without any prompts.

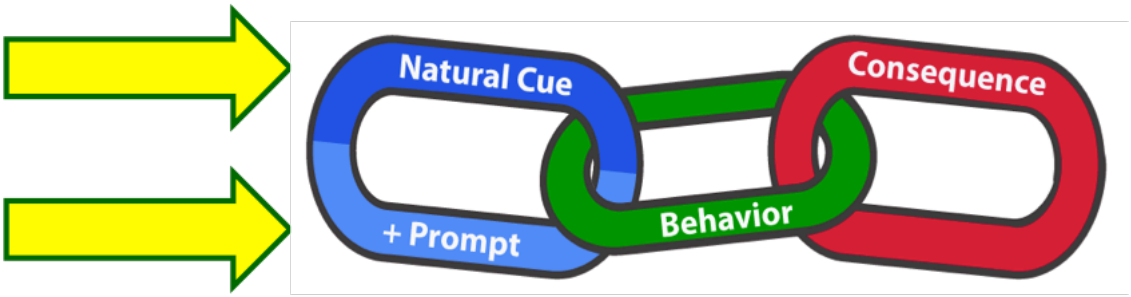
Strategies for fading prompts include:

- **Decreasing the number of prompts** by implementing some complete learning trials that don't include a prompt.
- **Decreasing the intensity with which you give a prompt** by voicing a verbal prompt more softly over time or reducing the control of a physical prompt over time.
- **Increasing the time between a natural cue and the delivery of a prompt** by pausing to see if the target behavior will occur in response to the natural cue before you provide a prompt. This is called "**time delay**".

Examples of fading prompts:

- To help a child learn to walk up and down stairs independently, you might fade from a full physical prompt (most intrusive), to partial physical assistance, to a verbal reminder to hold the rail, and then eventually to walking up and down stairs independently.
- To help a child use 3 words to request an object, you could use time delay and gradually lengthen the amount of time between the natural cue and a verbal model until he is able to make a 3-word request for an object without a verbal model.





Providing Additional Help (Prompts)

If the child does not perform the target behavior following the antecedent (natural cue or natural cue plus a prompt), you can provide additional help to increase the likelihood that the child will perform the target behavior. Providing additional help gives you another chance to elicit the target behavior and, if successful, provide a consequence that would complete the learning trial.

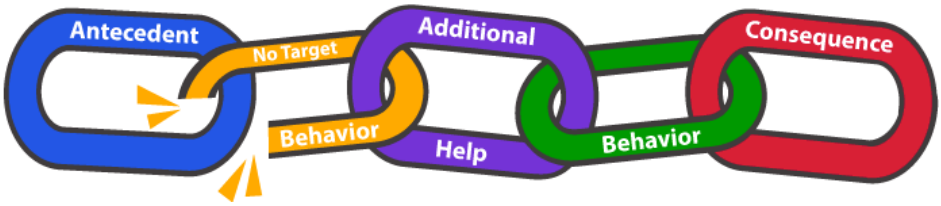
Additional help increases the likelihood that the child will perform the target behavior and should be provided if the target behavior does not occur following the antecedent.

Strategies for providing additional help include:

- **Repeat the antecedent**, if you think the child did not see it or did not attend to it.
- **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).** This option is not possible for all behaviors. With verbal behaviors, the most supportive prompt you can provide is a verbal model.

In some situations, you might use a successive combination of these options. The prompt(s) you use will depend on (a) the characteristics of the child, (b) the behavior you want the child to perform, (c) the child's phase of learning, and (d) other circumstances in the activity (e.g., if peers are waiting for the child to do the behavior, it is important for the child have quick success and praise). Hopefully, the use of a prompt will result in eliciting the desired behavior so a consequence can be provided.

- For example, Davion is asked to count the number of cups that are on the table for snack (3 cups). His teacher says, "Davion, count how many cups we have." Davion touches the first cup and says "one", but as he touches the second cup, he says "three." His teacher provides an additional help prompt to make sure he counts the three cups correctly so a positive consequence can be provided. She says, "How many cups? Count them again." She guides his hand to move each cup (physical prompt) and verbally models counting each one for him so that he counts the cups correctly.



Consequences

A consequence is something that happens in the child's environment immediately following his/her behavior. A consequence can increase or decrease the likelihood a behavior will occur again in the presence of the same antecedent. The embedded instruction approach uses positive consequences.

A positive consequence is something presented in the child's environment immediately following the behavior, which increases the likelihood the behavior will occur again in a similar situation.

It is important that consequences occur **immediately** after the target behavior. It is also important to provide the consequence every time the target behavior occurs, especially when the child is initially acquiring or learning the behavior.

Selecting Consequences

Consequences need to be individualized for children because one child may not desire what another child desires. Also, for a particular child, desired consequences may change over time. It is important to continually consider whether the consequences provided are desired enough by the child to increase or sustain his or her motivation to produce the targeted behavior.

Naturally Occurring Consequences

- **Access to preferred toys, materials, activities, or people.** Some examples include being allowed to play with a toy after requesting it using a 3-word phrase, listening to music after activating an adapted switch, sitting in a special chair after signing to request a turn, or playing with friends after using a 2-word phrase to initiate a play interaction.

- **Continued social interaction.** This involves a logical extension of an interaction following the child's demonstration of a target behavior. An example is a peer who continues to engage in a desired activity with the child such as rolling a ball back and forth after the child signs "my turn" to indicate he wants the child to roll the ball back. Another example is an adult engaging in a social conversation with the child after she uses 1 word to gain the adult's attention.

Acknowledgment or praise from another. This can be verbal or non-verbal recognition from an adult or child.

- **Verbal recognition** examples include phrases such as, "I like the way you____!" "Good job," "Awesome!" Praise is most effective if it is descriptive and tells what the child did. For example, saying, "Good, you asked your friend for a block." is more effective than saying, "Good job." Acknowledgement should also attribute children's success and improvement to their effort rather than to external factors such as luck.

- **Non-verbal recognition** examples include smiling enthusiastically, giving high fives, thumbs up, pats on the back, hugs, or proximity to child.

- **Understanding, learning, or mastering**. The child does something to indicate understanding that he or she is learning or mastering a skill and shows a sense of joy or excitement. For example, the child puts together the puzzle and says, “I did it!”

Planned Consequences

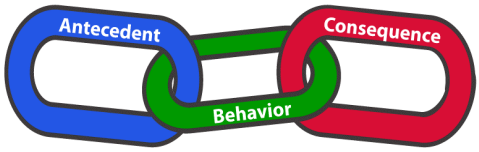
- **Token, food, or preferred object.** The child is given an object along with verbal recognition after the desired behavior occurs. For example, the child is given a piece of cereal each time she names a picture in a storybook. The cereal is unrelated to the target behavior of naming pictures. While planned consequences such as the cereal may be less related to the target behavior than natural consequences, they are sometimes necessary to motivate children when a natural consequence is not sufficient**.**

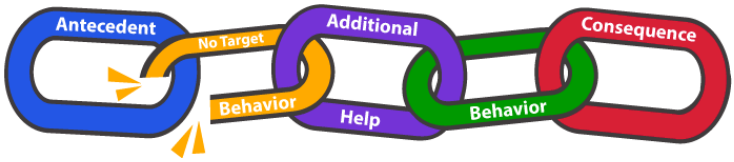
    - It is important that unrelated consequences be paired with a natural consequence such as verbal recognition, and that the unrelated consequence is faded over time (e.g., Say, “You’re right! That is a house,” while giving the child the piece of cereal).

- **Praise.** Praise is a form of feedback that tells the child they have accomplished the desired behavior or performed the correct behavior (e.g., “Good job, you did it!”).

- **Descriptive Feedback.** Providing descriptive feedback gives the child information about his/her performance by making explicit for the child what was correct and what was not correct about the behavior. For example, saying, “Good, you asked your friend for a block,” is more effective than saying, “Good job.”

    - Descriptive feedback can also be used when the target behavior does **NOT** occur after additional help is provided. In this case, descriptive feedback is used to model or tell the child what the desired target behavior is. For example, saying, “If you want a block, you should say, ‘Can I have a block?’” provides specific feedback about what target behavior is expected.





Feedback

Sometimes the target behavior does not occur even after additional help is provided to the child. When this happens, it might be necessary to end the trial without the behavior occurring. Before moving on to another embedded learning opportunity or activity, it is important to end the trial by providing feedback. Feedback should describe what the child did or what the child should have done.

Feedback is a special type of consequence. It is used to end a learning trial when the target behavior does <u>not</u> occur, even after additional help is provided

Examples of Feedback

- If despite several prompts to elicit a 2-word request, the child does not produce 2 words, the teacher might decide to end the trial by saying, "You said 'milk' but I wanted you to say 'more milk.'" The teacher would simply move on after providing the feedback and would come back to the child later and provide another opportunity for the child to demonstrate the target behavior (2-word request).

- If the child was learning to name objects in pictures, the teacher could provide additional help by saying, "This is a spoon. Say, spoon." However, if the child does not respond or says, "oon" the teacher might decide to end the trial with feedback saying, "This is a spoon. Good job trying to say spoon."

Note: For **physical behaviors** you can usually provide a controlling prompt like hand-over-hand to ensure the target behavior occurs unless, the child fatigues or refuses adult support. For **expressive verbal behaviors,** the most supportive prompt you can provide is a verbal model. It is more likely that you will need to use feedback when the target behavior is to verbally express something than when the behavior is to engage in a motor action.

A "Correct" Learning Trial with No Child Behavior

When a trial ends with feedback, it has been implemented with fidelity (i.e., a correct learning trial) because the teacher implemented all components of the trial correctly, but the target behavior did not occur.

Putting the Pieces Together for Complete Learning Trials

Basic Complete Learning Trial

Antecedent	Behavior	Consequence
The teacher says, "Matthew, put the red car ***in*** the garage," while she points in the garage.	Matthew drives the car ***in*** the garage.	The teacher says, "Good job! You parked the car ***in*** the garage."

Complete Learning Trial with Additional Help

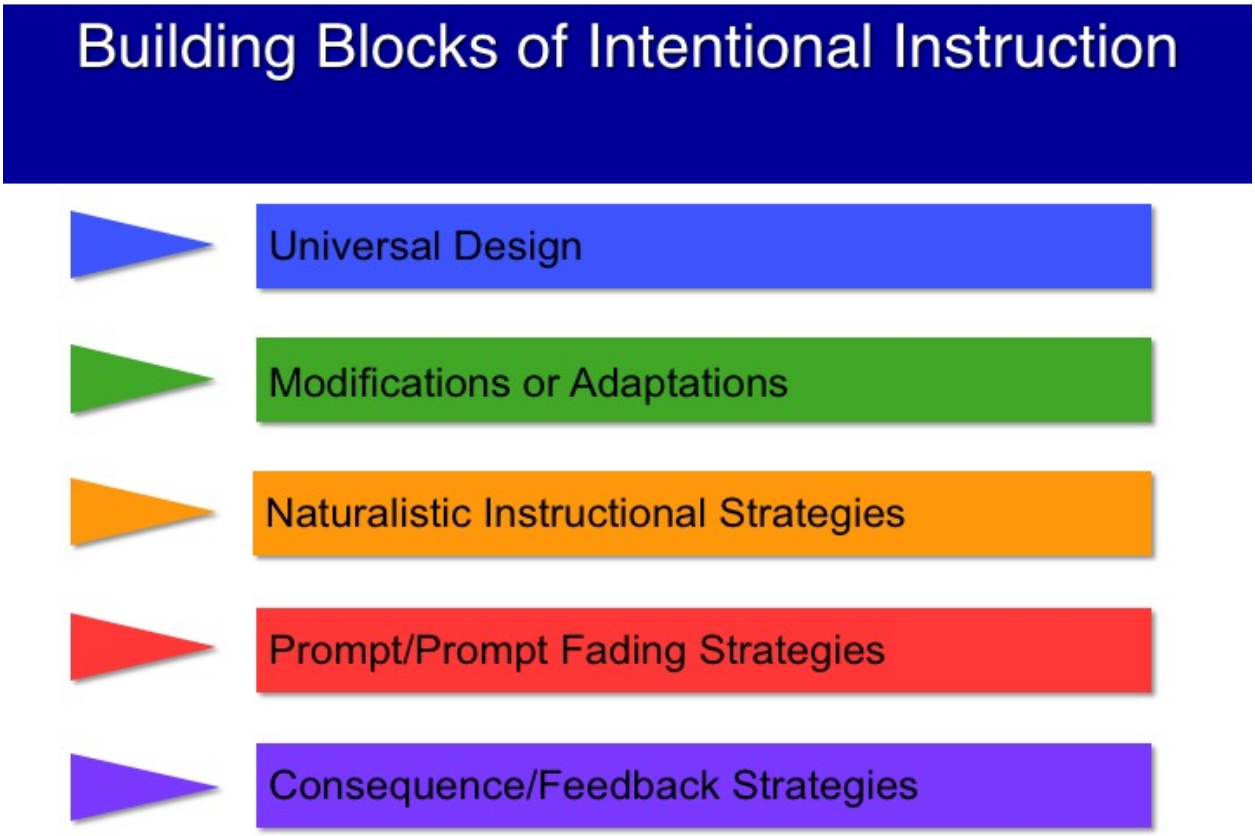
Antecedent	Behavior	Additional Help	Behavior	Consequence
The teacher gives Davion 2 blocks and says, "Count how many blocks we have."	Davion points to one block and says, "1."	The teacher says, "You said one. There are two blocks." The teacher takes Davion's hand, points to each block and says, "1, 2."	Davion points to each block and says, "1, 2."	The teacher says, "Great job. You counted two blocks," and then counts the blocks again: "1, 2."

Correct Learning Trial with Feedback

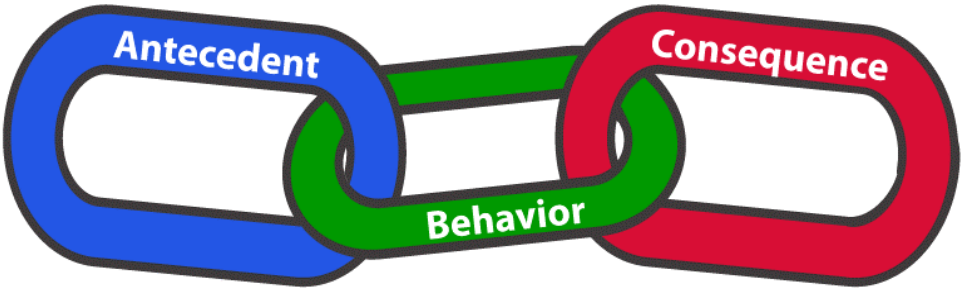
Antecedent	Behavior	Additional Help	Behavior	Feedback
The teacher gives Davion 2 blocks and says, "Count how many blocks we have."	Davion points to one block and says, "1."	The teacher says, "You said one. There are two blocks." The teacher takes Davion's hand, points to each block, and says, "1, 2."	Davion points to one block and says, "1."	Teacher says, "You counted one block. There are two blocks. See? 1, 2." As she counts, she touches each block. Then she says, "We will try again later."

Instructional Procedures

The following instructional procedures can be used to ensure you are implementing complete learning trials. These procedures have been taken from a variety of sources emphasizing different aspects of instruction. Each procedure is unique in the way it promotes complete learning trials. Procedures can be used together to ensure complete learning trials. Instructional procedures include universal design, modifications or adaptations, naturalistic instructional strategies, prompt and prompt/fading strategies, and consequence and feedback strategies.



Remember: instructional procedures are effective when they result in a complete learning trial.



Universal Design

Universal design for learning focuses on a set of principles for curriculum development and activity planning that gives all individuals equal opportunities.

Examples of universal design include, but are not limited to:

- Altering the environment (physical, social, temporal)
- Modifying the materials (size, accessibility)
- Modifying the instructional media (paper/pencil to computer)
- Altering the task or activity (duration, difficulty, or size)
- Altering the task sequence

Modifications or Adaptations

Modifications and adaptations involve changes made to an ongoing classroom activity or materials to achieve or maximize a child's participation (Sandall and Schwartz 2008).

Examples of modifications and adaptations include, but are not limited to:

- Using child preferences to engineer the learning environment
- Providing opportunities for choice
- Using specialized equipment
- Providing novel or interesting materials to occasion targeted behaviors
- Putting desired or preferred materials out of reach to occasion targeted behaviors
- Giving inadequate portions or limiting materials to occasion targeted behaviors
- Creating unexpected situations to occasion targeted behaviors

Naturalistic Instructional Strategies

Naturalistic instructional strategies help children learn a new behavior or skill. They typically involve following the child's lead and helping the child expand or elaborate on his/her behavior. We will look at three naturalistic strategies in detail.

Naturalistic strategies include, but are not limited to:

- Incidental Teaching
- Mand-Model
- Naturalistic Time Delay

Incidental Teaching. Incidental teaching is a naturalistic strategy that is initiated by the child. The child initiates an interaction in response to something in the environment he or she wants to obtain or wants to communicate about. The adult uses this initiation as an opportunity to elicit more elaborate behavior by prompting the child. When the child produces the more elaborate target behavior, a positive consequence is provided.

When to use:

- The adult might arrange the environment to encourage the child's desire for interactions and might also use incidental teaching when the child initiates naturally during the day. Incidental teaching is useful for priority learning targets focused on communication, but can also be used with other types of skills including social skills. Incidental teaching is more useful in naturally occurring routines and activities in which child initiations are likely to occur.

Who to use it for:

- Incidental teaching is useful for children with a variety of disabilities who are able to initiate communication or engage with materials.

Mand-Model. Mand-model is a naturalistic strategy initiated by the teacher. In this strategy, the teacher provides a mand to the child followed by a model of the target behavior. For example, the teacher might want the child to use single words to communicate. The teacher might say to the child "say juice" (mand-say; model-juice). After the child says "juice" the teacher provides descriptive feedback (e.g., "Good job. You said 'juice' and I gave you the juice box.").

When to use:

- Mand-model is useful when the child is unlikely to produce the target behavior without a model demonstration to imitate.

Who to use it for:

- Mand-model is useful for children with a variety of disabilities who need to expand their communication skills. Children must be able to imitate for this strategy to be effective.

Naturalistic Time Delay. Naturalistic time delay involves using a natural cue to set the occasion for the child to use a target skill or behavior.

Following a natural cue, the adult should: 1) establish joint attention, 2) look expectantly at the child, and 3) wait for the child to perform the targeted behavior. If the child performs the targeted behavior, a naturally occurring consequence will be obtained. If the child does not perform the targeted behavior, a prompt that will elicit the behavior is given. If the targeted behavior occurs following the prompt, the consequence will be obtained. If the child produces a behavior that is not the target behavior, additional help (i.e., correction procedure) that will elicit the behavior should be used. If the targeted behavior occurs following the additional help, the consequence will be obtained.

When to use:

- Naturalistic time delay is easy to use in ongoing routines and activities. It can also be used across domains, including self-help, social, pre-academic, and communication skills. Naturalistic time delay is useful when working with individual children or during group instruction. It is also useful when focusing on individual behaviors or sequences of behaviors.

Who to use it for:

- Naturalistic time delay can be useful for children with mild or significant disabilities. It is also effective with children who are motivated to respond.

Prompt/Prompt Fading Strategies

Prompt/prompt fading strategies provide explicit support to help children perform skills/behaviors. Prompt/prompt fading strategies are similar to naturalistic instructional procedures. However, prompting strategies typically are given specific names and have specific instructional steps that are followed.

Prompt/prompt fading strategies include, but are not limited to:

- System of Least Prompts (SLP) (increasing assistance)
- Most-to-Least Prompts (MLP) (decreasing assistance)

System of Least Prompts. In a system of least prompts, the child is given increasing amounts of help until the learning trial is complete. Two or more levels of help may be needed in a single complete learning trial. If the child only needs a little help, a verbal prompt may be enough. If more adult help is necessary, the adult would

provide increasingly supportive prompts until the target behavior is elicited. All of the levels of prompts may be used or only selected levels from less supportive to more supportive.

When to use:

- The system of least prompts is very useful for skills a child is able to do, but not with accuracy or fluency. It also can be used to support generalization. This system provides the opportunity for the child to respond as independently as possible. However, using a system of least prompts may also allow the child to make errors. In some cases, the child may learn that help is coming if he or she waits, which can create dependency on prompts.

Who to use it for:

- The system of least prompts is useful for children with a variety of disabilities.

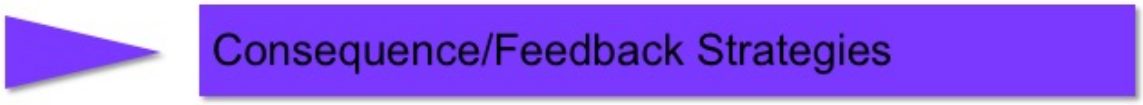
Most-to-Least Prompts. In most-to-least prompts, the adult only gives one level of assistance per complete learning trial. To prevent child errors or help a child learn a behavior that is not in his or her repertoire, the adult initially uses the most assistance needed to ensure a correct response. The help will be gradually decreased across future complete learning trials until the child performs the target skill or behavior without help.

When to use:

- Most-to-least prompts are useful when a child is acquiring a skill. This prompting strategy is also useful for teaching target skills or behaviors that are made up of a sequence or chain of behaviors such as dressing or grooming skills. The advantage of most-to-least prompting is that child errors are kept at a minimum. However, teachers should probe to determine when support levels should be reduced.

Who to use it for:

- Most-to-least prompts are effective with children with significant disabilities.



Consequence/Feedback Strategies

Consequences and feedback strategies are used in conjunction with other instructional procedures to ensure a complete learning trial.

Positive Consequences. If the child responds to an antecedent with a correct behavior, a positive consequence should always be provided. A positive consequence makes it more likely that the child will produce the behavior again in relation to the antecedent. Positive consequences can occur naturally as a result of the situation or they can be planned and delivered by the adult. For information about positive consequences, see the Consequences section of this guide (page 65).

Feedback. Descriptive feedback can be paired with a positive consequence. Descriptive feedback provides the child with more information about the situation. For example, a teacher might ask a child, “Where is the red car?” The child might respond by pointing to the red car. The teacher might say, “Yes, you found the red car. Good pointing.” The teacher described for the child what he or she did that is resulting in praise.

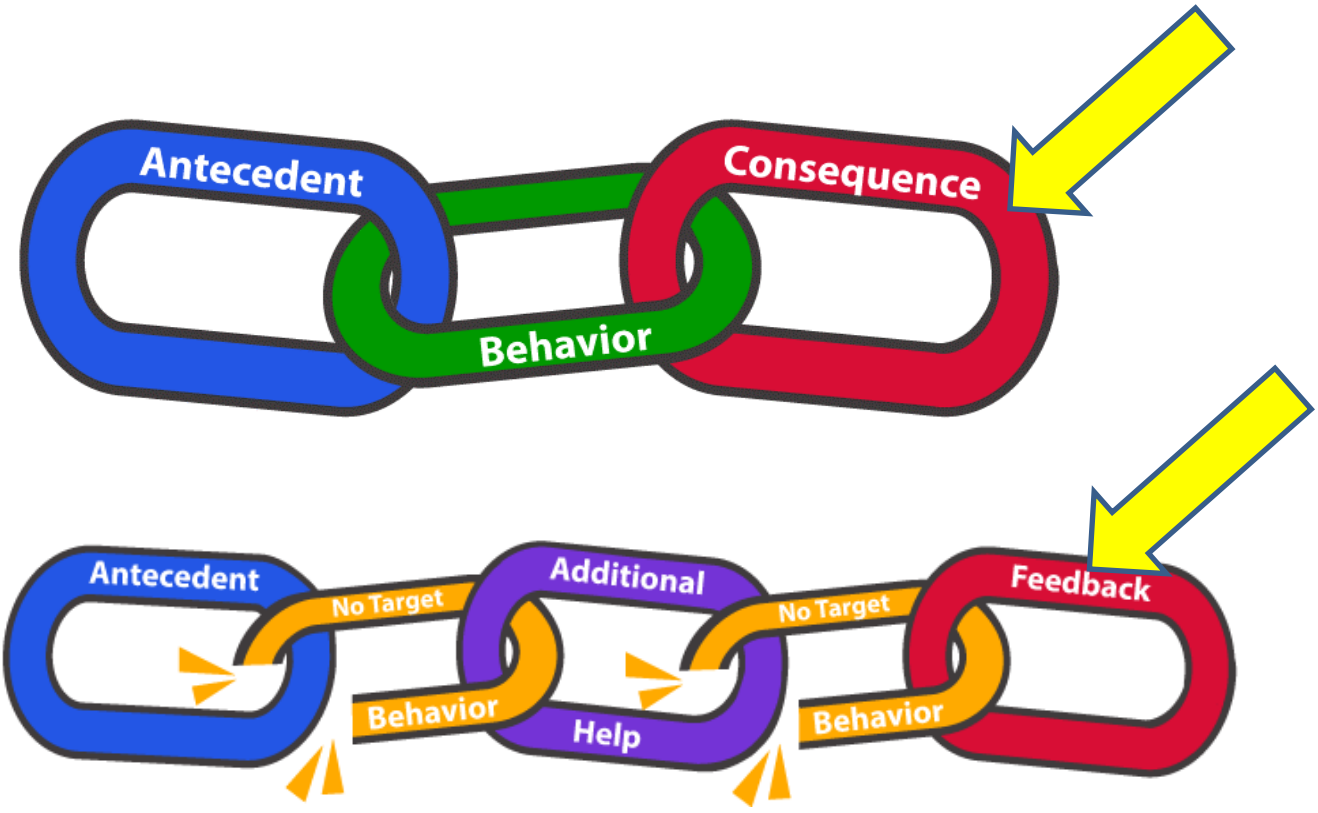
Feedback can also be provided to end a trial when the target skill or behavior does not occur, even with additional help. In this case, it is important to provide feedback to the child to model the expected target behavior. Using the example above, if the child does not find the red car after additional help, the teacher might point to the red car and say, “This is the red car. We can try again later.” For information about feedback see the Feedback section of this guide (page 67).

When to use:

- Consequence and feedback strategies are useful for increasing the child’s demonstration of the skill or behavior in the presence of a similar antecedent

Who to use it for:

- Consequence and feedback strategies are useful for all children.



Instructional Procedures Reference Chart

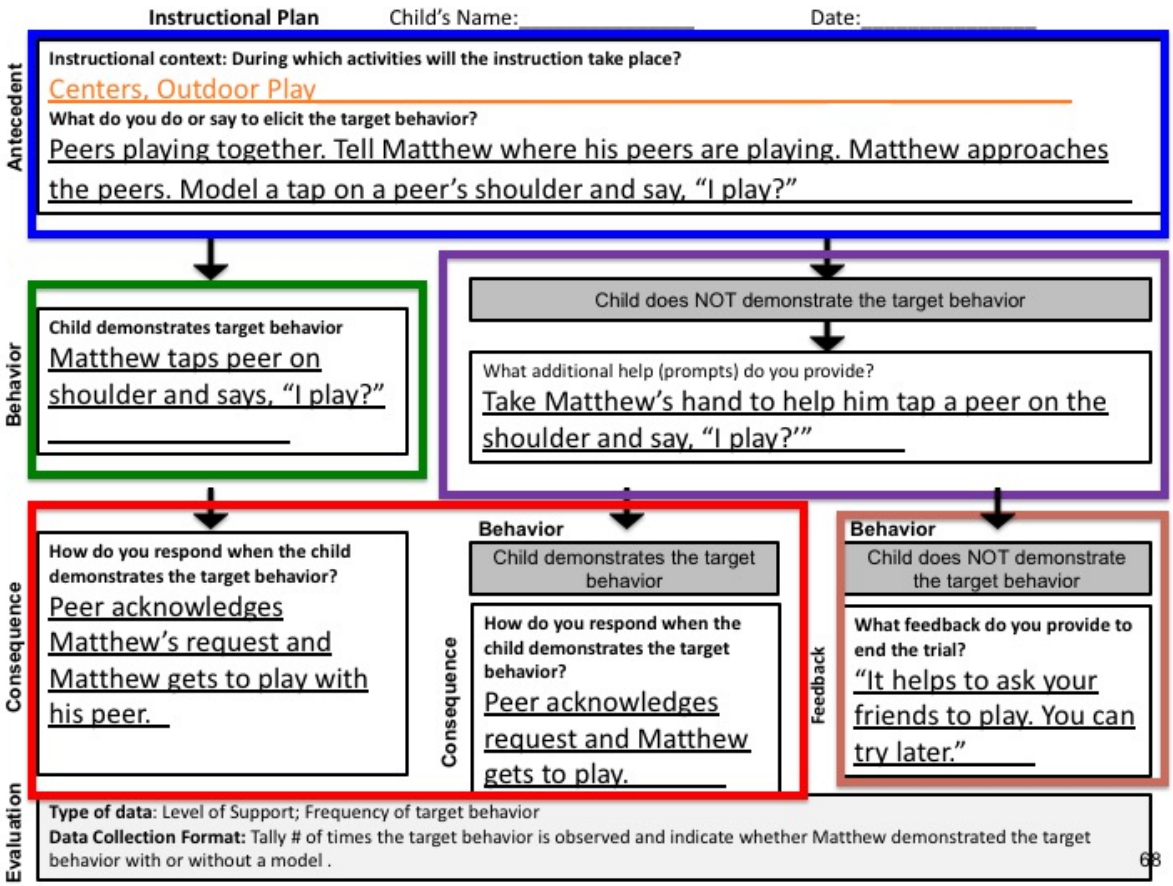
Instructional Procedures	Specific Strategies	Example
Naturalistic instructional strategies help children learn a new skill or behavior. They typically involve following the child's lead and helping the child to expand or elaborate on his/her behavior.	• Naturalistic Time Delay • Mand-Model • Incidental Teaching	• A child's priority learning target involves using a finger to push buttons to activate toys. The child is using her fist to try and activate the toy. The adult joins the child's play, imitates the child's pushing action and then uses a finger to point to the button on the toy and says, "Use your finger to push the button." If the child does not respond within a certain time period (e.g., 5 seconds), the adult might prompt the child again to push the button. --- • The teacher shows the child that the ball is available for use during play (the child really likes soccer balls). The teacher waits 5 seconds for the child to request the ball. If the child does not request the ball, the teacher models asking for the ball (e.g., ball, please; I want ball). The child gets to play with the ball after asking for it, following the adult model.
Prompt/prompt fading strategies are used to increase the probability that the child will respond. Many types of prompting strategies are available; however, prompts should be faded as soon as possible.	• System of least prompting --- • Most-to-least prompting	• Mia is working on naming pictures in books. The teacher gestures to a picture and waits for Mia to respond. Mia does not. The teacher then says, "Oh, I see a ___." and waits for Mia to respond. If Mia does not respond, the teacher will continue to provide more supportive prompts (i.e., prompt hierarchy). For example, the teacher might point to the object and say, "What's this?" or "Say dog." --- • Sam is learning to imitate adult actions. His teacher starts by providing a full physical prompt to show him how to perform the action. After Sam can imitate with a full physical prompt the teacher will provide partial physical

		help to perform the actions. Periodically the teacher will check to see if Sam can perform the action with a gesture rather than a partial physical prompt and will continue to fade the level of prompting over time (e.g., full physical, partial physical, gestural cue, verbal cue, natural cue).
Consequence/Feedback strategies are used in conjunction with other instructional procedures. They should **always** be used after a child has demonstrated a targeted behavior so that a complete learning trial is obtained.	• Positive consequence- A consequence for a behavior that increases the likelihood the behavior will occur again with more intensity or for longer duration. --- • Descriptive feedback- Praise is most effective if it describes what it was the child did that was targeted. Descriptive feedback is used to let the child know what they did that was correct. --- • Feedback to end a trial when the target behavior does not occur- If the target behavior does not occur even after additional help is provided, **it is important to provide feedback to tell or show the child the expected behavior.**	• After a child counts to 5, the teacher says, "Good job!" (planned consequence). • After a child asks for his favorite book, the teacher gives the book to the child (naturally occurring consequence). --- • After a child counts to 5, the teacher says, "Wow, way to go counting to 5!" (planned consequence). --- • If a child's target behavior is to use a 3-word phrase to request an object and she uses a 2-word phrase to request a ball after additional help is provided, the teacher might say, "If you want the ball, you should say, 'I want ball.'"

Using the Instructional Plan

Use the instructional plan in the Appendix to specify:

- What the target **behavior** looks or sounds like.
- What you will do or say to elicit the target behavior (**antecedent**), including the instructional context, natural cues to elicit the target behavior, and what, if any, prompts will be used.
- What **additional help (prompts)** will be provided if the target behavior does not occur.
- What **consequence(s)** will be provided if the child demonstrates the correct target behavior.
- What **feedback** will be provided if the target behavior does not occur, even with additional help.



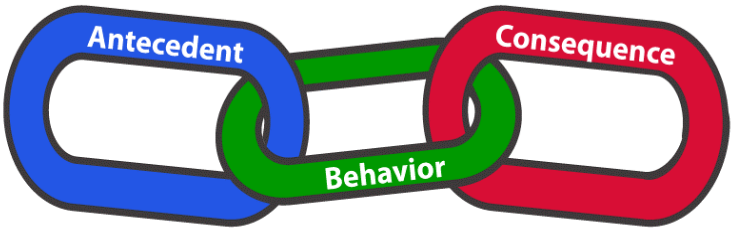
Selecting and individualizing the right instructional procedure for a particular child or a particular priority learning target is a problem-solving process. Remember to consider:

- Characteristics of the child (including preferences and interests),
- Type of skill or behavior,
- Child's phase and pace of learning (acquisition, fluency, maintenance, generalization, adaptation), and the
- Instructional procedure(s) that is least intrusive and most effective.

How to Teach: Tips for Success

For embedded learning opportunities to be effective, they must be implemented as **complete learning trials**. Complete learning trials include an antecedent that sets the occasion for a target skill or behavior to occur, the target behavior, and a positive consequence (A-B-C). Sometimes, additional help might be needed for a child to demonstrate the target skill or behavior. If the target skill or behavior does not occur even after additional help is provided, it is important to provide feedback describing or showing the child what the target skill or behavior looks, sounds, or feels like. The best way to ensure embedded learning opportunities are implemented as complete learning trials is to consider and plan for each component of the complete learning trial. Here are some tips for this process:

- Identify the natural cue(s) for the target skill or behavior.
- Identify what naturalistic instructional procedures might be useful for eliciting the target skill or behavior.
- If the natural cue is not sufficient to elicit the target behavior, use the prompt hierarchy and review prompt/prompt fading strategies to consider what prompts might need to be paired with the natural cue to elicit the target behavior.
- If you plan to pair prompts with the natural cue, make a plan for how you will fade prompts over time.
- Use the prompt hierarchy to help you decide what additional help you will provide if the target skill or behavior does not occur after the antecedent.
- Identify what natural or planned consequence is likely to be motivating for the child.
- Consider how planned consequences can be faded over time.
- Identify how you will provide feedback to the child if the target skill or behavior does not occur, even after additional help is provided.
- Use the *Instructional Plan* to write down how you plan to provide each component of a complete learning trial.



Complete Learning Trial

How to Evaluate

Teaching Practice

6. Collect and analyze data on embedded instruction implementation and child progress to inform instructional decisions.

Three Key Evaluation Questions

Am I doing it?

The first key evaluation question to consider is related to your (or other team members') implementation of embedded instruction. This means using strategies to help evaluate whether you are implementing embedded instruction as intended. Data should be collected about when embedded learning opportunities occur for priority learning targets and whether implementation of the A-B-C components results in **complete learning trials.** A term used to refer to this type of evaluation is "fidelity of implementation."

- Are embedded learning opportunities occurring in the activities in which we planned for them to occur?
- Are the number of planned trials occurring in these activities?
- Are the components (the A-B-Cs) implemented so that **complete learning trials** occur?

Is it working?

The second key evaluation question helps determine whether embedded instruction is working for a child by collecting data on whether the child is acquiring, gaining fluency (accuracy plus speed), maintaining, generalizing, or adapting priority learning target skills or behaviors. For example, you might measure the extent to which the child is learning a new skill or using the skill across different people or settings. Monitoring child progress on priority learning targets helps answer the question, *Is it working?*

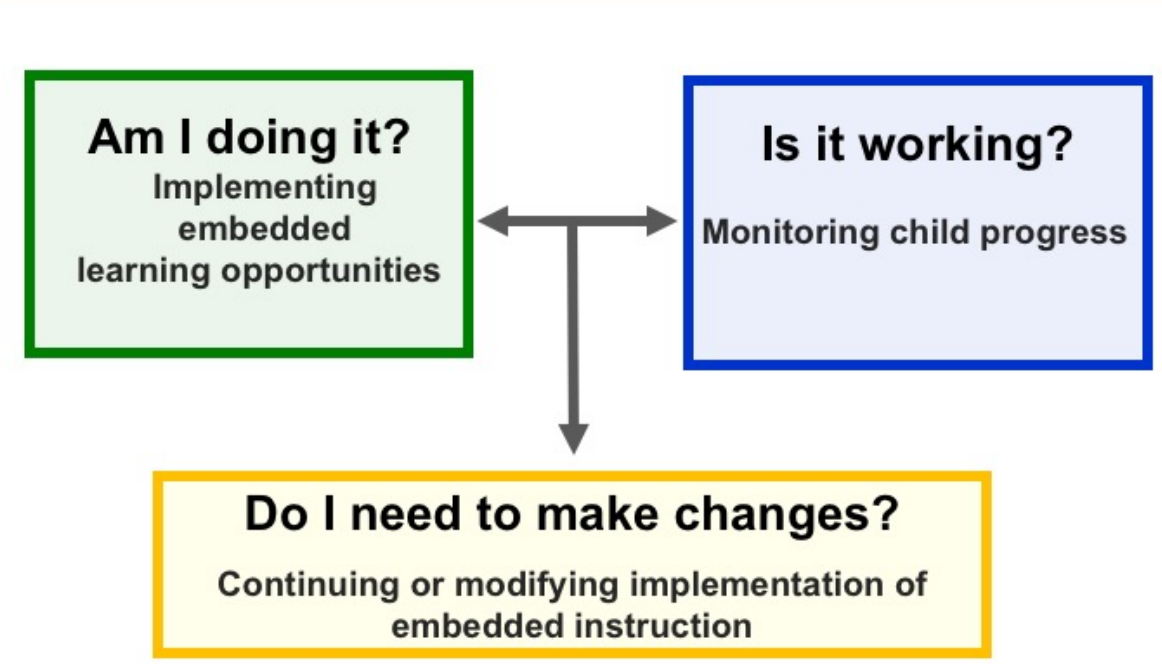
- Is the child able to demonstrate the target skill or behavior?
- What level of support or prompting is being provided for the child in the antecedent and in the form of additional help?

Do I need to make changes?

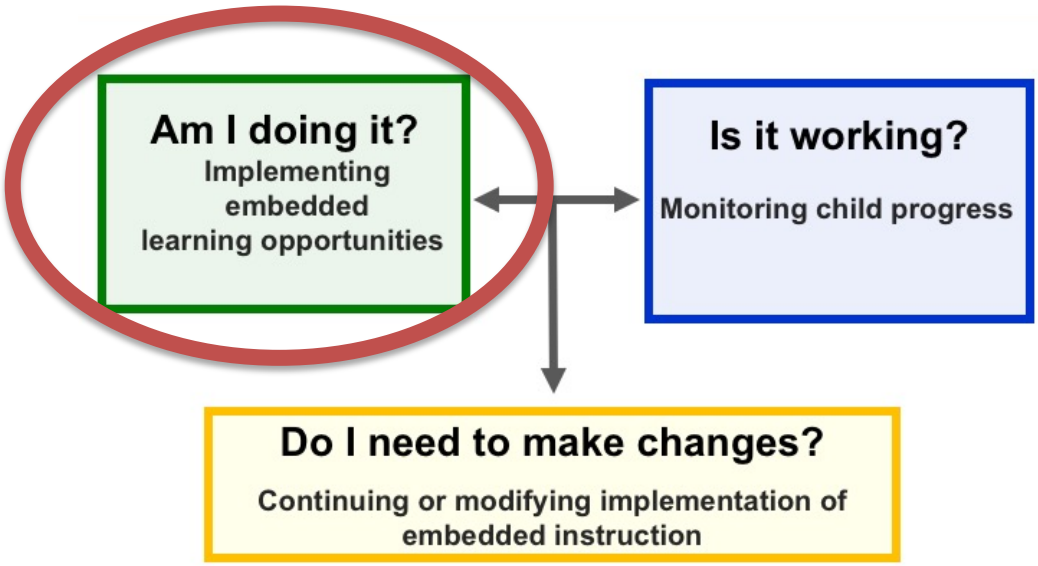
The third key evaluation question involves making data-informed decisions. To answer question 3, you need to integrate and analyze evaluation data related to *Am I doing it*? and *Is it working*? You might consider:

- Is the child receiving a sufficient number of embedded learning opportunities delivered as complete learning trials?
- Is the priority learning target skill appropriate for the child's current skill level and phase of learning?

Here is a diagram of the three key questions for evaluating embedded instruction. The diagram below shows the relationship between *Am I doing it*? and *Is it working*?. Answering these two questions helps you decide whether you should continue with or revise your implementation of embedded instruction— *Do I need to make changes?*



The first key evaluation question to consider is related to your (or other team members') implementation of embedded instruction. This means using strategies to help evaluate whether you are implementing embedded instruction as intended. <u>You cannot determine if embedded instruction is or is not effective if you have not first looked at your fidelity (accuracy and consistency) of implementation. Let's get started with *Am I doing It?*.</u>



Am I Doing It? Implementation Fidelity

There are three questions to consider when evaluating whether embedded instruction is implemented as planned (i.e., *Am I doing it*?).

Are embedded learning opportunities occurring in the activities in which they were planned to occur?

Review your planning documents to determine when you planned to implement embedded learning opportunities. Use data collection strategies from the workshop and from this guide to collect data on when you actually implemented embedded learning opportunities. You can focus on when you planned to embed learning opportunities for a specific priority learning target across multiple activities or you might choose to focus on a particular activity, routine, or transition.

Are the number of planned learning opportunities occurring in these activities?

Determine how many embedded learning opportunities you implement by collecting implementation data during ongoing classroom activities, routines, and transitions. Data collection is not likely to happen unless it is planned. This involves deciding how often implementation data will be collected, what method you will use to collect data (e.g., video, "real-time" data collection form), and who will collect the data.

Data can be collected on an ongoing basis throughout the day or it can be collected using a planned [probe] schedule. The probe approach is a way to collect data on a regular, but not continuous basis. You might decide to collect data each day during one activity, on one child, or on a select number of priority learning target skills. The goal is to make sure you are collecting data for each child's priority learning targets during all planned activities on a regular (probably weekly) basis.

Are the components (A-B-Cs) implemented so that complete learning trials occur?

Examine implementation data to evaluate whether you implemented the trials accurately. Ask the following questions related to complete learning trials:

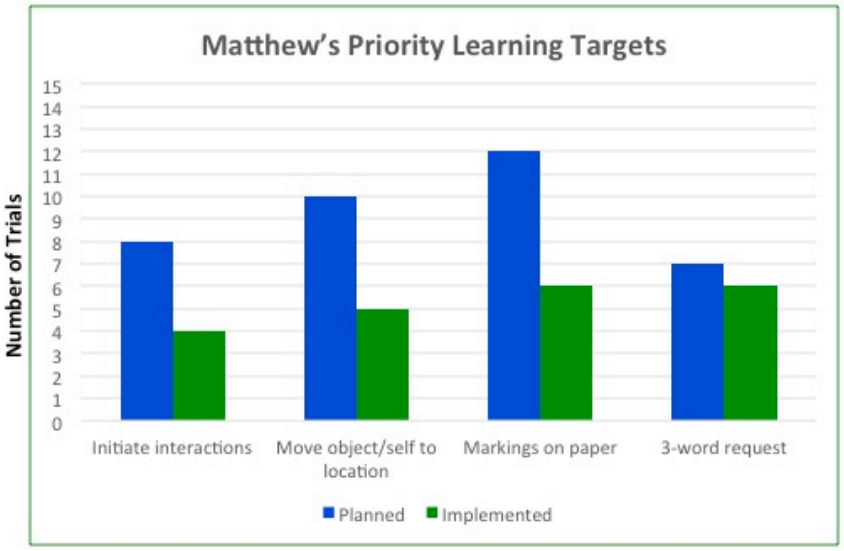
- Did you implement **complete** learning trials (A-B-Cs)?
- Were the **antecedents** you implemented appropriate for the child's phase and pace of learning and individual interests and motivations?
- Did the **behavior** specified in the priority learning target occur?
- If **additional help** was needed, was it provided? Were the steps of the procedure followed correctly?
- Were positive **consequences** delivered every time the priority learning target behavior occurred?
- If the target behavior did not occur after additional help was provided, was **feedback** delivered to end the trial?

After you address the *Am I doing it?* questions:

Graph Your Data

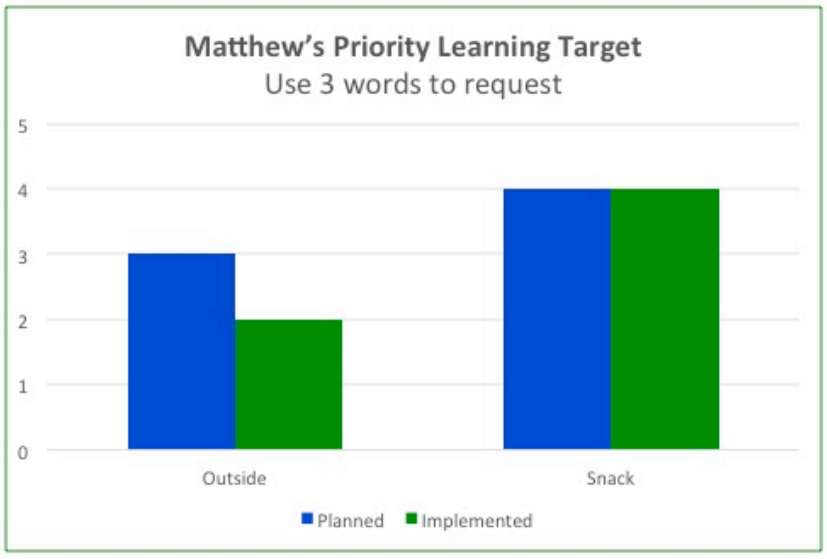
Compare how many embedded learning opportunities were planned and how many were implemented. Data can be compared at two levels:

- **Global,** focused on comparing how many total opportunities you planned versus how many you implemented across all activities, routines, or transitions for each priority learning target
- **Specific,** focused on comparing planned versus implemented opportunities for each priority learning target in each activity, routine, or transition.



Global

Planned versus implemented trials for four of Matthew's priority learning targets across the day

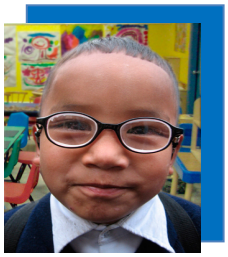


Specific

Planned versus implemented trials for one of Matthew's priority learning targets for two activities

Decide whether you have implemented embedded instruction as planned. If you decide that implementation did not occur as planned, then you will need to consider whether and how the plan should be revised.

Case Study: Embedding Instruction with Davion



Miss Lou has just met Davion, a new student who will join her early childhood inclusion class. The tiny 4-year-old boy with thick glasses has lived with his supportive grandparents since he was 2 years old. Davion was born at 24 weeks gestation, spent many months in the NICU, and has undergone multiple surgeries. Home-based early intervention therapy services ended when Davion turned 3. He has gone without an intervention program for the past year, as his grandparents did not yet feel comfortable enrolling him in the school-based program for children over age 3. In addition to delays in general development, Davion has been diagnosed with mild cerebral palsy and a vision impairment.

Davion has worn glasses since 18 months of age. He holds objects close to look at them and seems to need bright lighting. His current vision is 20/200-20/400. Davion's glasses have a high minus (nearsighted) prescription. Objects look smaller through the lenses (all nearsighted prescriptions do this). Davion's eyesight affects him in several ways, including trouble walking up and down stairs, difficulty walking across mixed terrains, trouble finding objects that are not in front of him, not liking the lights turned off, and walking into objects as he approaches them (depth perception problems). Furthermore, Davion has a limited vocabulary. The school psychologist has reported he does not appear to have the language or play skills required for interactive play, but will attend to what others are doing and manipulate materials himself.

Miss Lou's current class of 15 has seven other children who have IEPs to address special needs. Miss Lou feels comfortable that the group has gotten to a point in which all 15 children are benefitting from her program.

Miss Lou knows she will need to work carefully with the vision specialist, therapists, the paraprofessional in her classroom, and Davion's family to address his priority learning targets so that he can take advantage of the learning opportunities in her classroom. To get a head start, Miss Lou has gone to her mentor teacher to get some ideas about how she can provide the systematic learning opportunities that Davion needs within the ongoing routines of her classroom. Miss Lou's mentor has shown her how to write observable and measurable, developmentally appropriate, functional and aligned, generative priority learning targets and how to use an activity matrix to plan when to provide instructional opportunities across the day. Now she is anxious to begin implementing embedded instruction learning trials with Davion on his priority learning targets.

Let's look at how we might evaluate implementation of embedded instruction. We will use Davion and his priority learning targets to illustrate how you would evaluate implementation of embedded instruction.

Let's look at some of the priority learning targets written for Davion along with the activity matrix created for him to see what his teacher planned.

Priority Learning Target 1: Davion will use 2-3 words to initiate play with another child by asking to join in a play activity (e.g., Can I play?, My turn) following a teacher model during centers, free play, and outside at least once a day for five consecutive days.

Priority Learning Target 2: Davion will count sets of up to 3 moveable objects (e.g., blocks, toy cars, crackers) using 1:1 correspondence when asked by an adult during centers, free play, and snack for 80% of the opportunities across a day for two consecutive days.

Activities	Davion's priority learning targets and number of learning trials planned
Arrival	
Circle	
Centers	Use 2-3 words to initiate play—2 Count up to 3 objects—2
Outside	Use 2-3 words to initiate play –2
Snack	Count up to 3 objects—2
Class Activity	
Free Play	Use 2-3 words to initiate play —2 Count up to 3 objects—2
Departure	
Transitions	

Review: Number of trials planned.
Priority Learning Target 1 (Initiate play by asking to join) = 6
Priority Learning Target 2 (Count 3 up to objects) = 6

Implement the instructional plan
(provide embedded learning opportunities using A-B-C)
and collect data on implementation

Look at the data collection summary sheets below to determine how many embedded learning opportunities were implemented to address each priority learning target in each of the planned activities on the activity matrix.

Priority Learning Targets	Planned Activities	Implemented Learning Opportunities
Use 2-3 words to initiate play	Centers	0
	Outside	1
	Free Play	1
Count up to 3 objects	Centers	2
	Snack	2
	Free Play	2

- Embedded learning opportunities for priority learning target 1 (use 2-3 words to initiate play) were delivered in 2 of the 3 planned activities. A total of 2 opportunities were provided for this priority learning target.
- Embedded learning opportunities for priority learning target 2 (count up to 3 objects) were delivered in all planned activities. A total of 6 opportunities were provided for this priority learning target.

Davion's Priority Learning Targets	# Planned	# Implemented	Difference
Use 2-3 words to initiate play	6	2	4
Count up to 3 objects	6	6	0
Total	12	8	4

- Miss Lou and her team implemented fewer opportunities than planned for priority learning target 1.
- All of the planned learning opportunities for priority learning target 2 were implemented.

Examine the quality of implementation to see if all the components of complete learning trials (A-B-Cs) were delivered for each priority learning target.

Learning Trials	Antecedent	Child Behavior	Additional Help (Prompts)	Consequence/ Feedback	Complete Learning Trial?
Use 2-3 words to initiate play **(6)**	**A**	**B**	**AH**	**C**	**Yes/No**
Trial 1	√	√	√	√	**YES**
Trial 2	√	√	√	√	**YES**
Trial 3	NOT DELIVERED				**NO**
Trial 4	NOT DELIVERED				**NO**
Trial 5	NOT DELIVERED				**NO**
Trial 6	NOT DELIVERED				**NO**
Count up to 3 objects **(6)**	**A**	**B**	**AH**	**C**	**Yes/No**
Trial 1	√	√	√	√	**YES**
Trial 2	√	**X**	**X**	**X**	**NO**
Trial 3	√	√	√	√	**YES**
Trial 4	√	**X**	**X**	**X**	**NO**
Trial 5	√	**X**	**X**	**X**	**NO**
Trial 6	√	√	N/A	**X**	**NO**

√ = *Implemented*

X = *Not implemented*

When you examine the data for priority learning target 1 (use 2-3 words to initiate play), you see that two complete trials were implemented, but four of the planned trials were not implemented. The criterion for this priority learning target is 'at least once a day for 5 consecutive days.' Given Davion is just acquiring the skill and required additional help on both occasions, it would be beneficial to provide all six of the planned opportunities.

Even though all six trials were implemented for priority learning target 2 (count up to 3 objects), four of the trials (Trials 2, 4, 5, and 6) were not complete. For three trials (Trials 2, 4, and 5), the target behavior did not occur and there was no additional help or feedback to complete the trial. For one trial (Trial 6), the target behavior did occur, but no consequence was provided. Davion needs Miss Lou to provide additional help when the behavior is not demonstrated and a consequence or feedback to support his ability to achieve the criterion of '80% of the opportunities across a day for two consecutive days.'

After Miss Lou reviews the quality of implementation with respect to the A-B-Cs, she might decide to continue implementing embedded instruction in the same way or she might decide to make changes to her implementation. Before making this decision, however, she needs to consider Davion's progress on these two priority learning targets.

At this point, Miss Lou has gathered important evaluation data about the need to embed additional learning opportunities for priority learning target 1 (use 2-3 words to initiate play). She also knows it will be important to consistently provide additional help when the behavior is not demonstrated and a consequence when the behavior does occur for priority learning target 2 (count up to 3 objects).

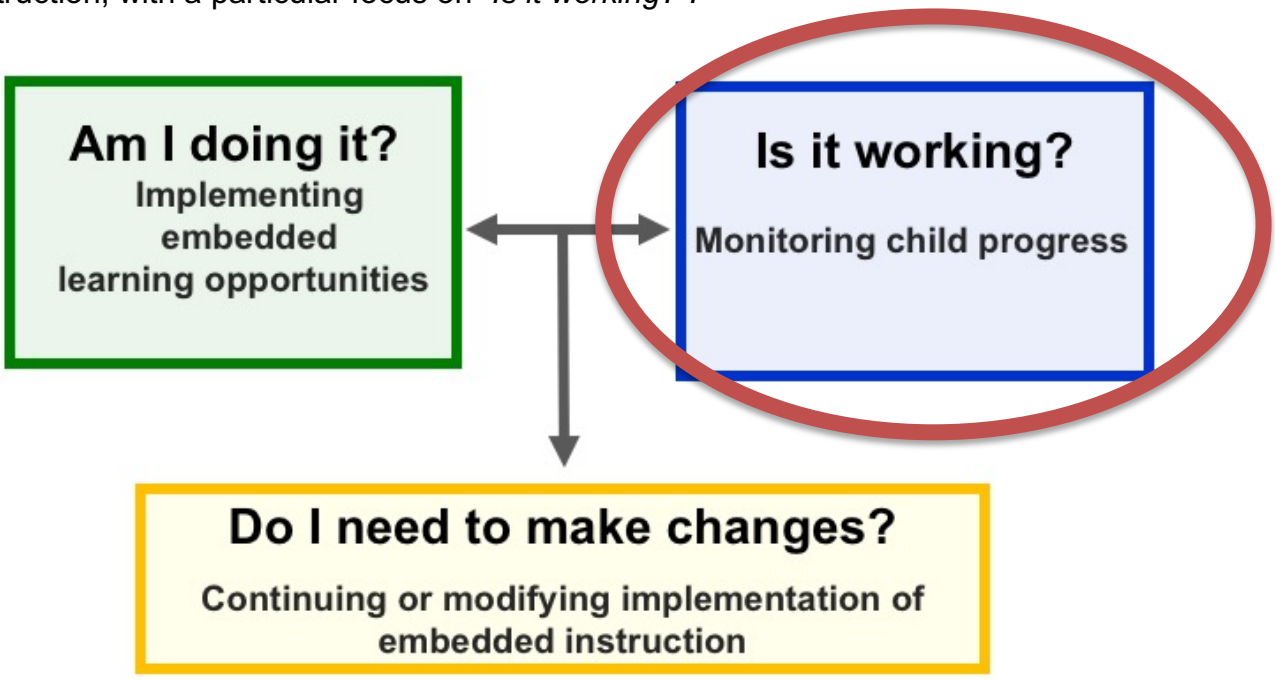
Is It Working?
Considerations for Monitoring Child Progress

Monitoring child progress is something you already do as a teacher. It is also an essential part of evaluating embedded instruction. Embedded instruction focuses on helping children learn skills in the activities and settings in which they need to use these skills. We have referred to this as the instructional context for learning. When we evaluate child progress in embedded instruction, it is important that we evaluate children's use of targeted skills within the ongoing activities, routines, and transitions of the classroom.

Monitoring child progress will help you decide if adjustments need to be made in your implementation of embedded instruction. The data you collect will help you locate and identify possible barriers to child progress and determine other instructional strategies that might be more effective or efficient for learning skills. When you begin monitoring child progress, the following questions can help guide you:

- What behaviors are targeted? What type of data do I need?
- How should I collect data for different types of behaviors?
- How often should I collect data? When? Where? And who should collect data?
- How should I display, summarize, and analyze child data?
- How should I interpret and use child data?

In this section, we provide additional information to help you evaluate embedded instruction, with a particular focus on *"Is it working?".*



What Behaviors are Targeted?

Typically, child behaviors fall into one of the following categories or domains:

- Motor
- Adaptive
- Social
- Cognitive and Pre-academic
- Communication

Some preschool programs might use different categories or domains. The categories are less important than the target skill or behavior reflected in the priority learning target you have selected.

To evaluate child performance or monitor child progress, priority learning targets must be *specific*, *observable*, *measurable,* and have *clearly stated conditions and criteria for performance*.

Why do you need observable priority learning targets?

An observable behavior is important because it describes what you will see or hear the child do. If you can observe a behavior, you can count it or measure it. An observable priority learning target behavior is one that can be (a) seen or heard, and (b) at least two people can agree has occurred.

Why do you need measurable priority learning targets?

To evaluate child performance or monitor child progress, you need to consider what dimensions of the behavior are important to measure. For example, do you want to know how well a child does something, how often a child does something, or how long the child does something?

Here are some examples of observable and measurable **behaviors**:

- With partial physical prompting [Child] will **greet** at least two **peers using 1-2 words (e.g., hello, good morning)** when they arrive in the morning or join a small group activity for five consecutive days.

- [Child] will **turn on/off** at least four **push button objects/toys (e.g., Big Mack, touch computer)** following an adult model during centers, meals, and free play activities for five consecutive days.

- [Child] will independently **walk up 3 stairs using alternating feet** each day for four consecutive data collection probes during playground and gym activities.

Here are some examples of priority learning targets that are **NOT** observable or measurable:

- [Child] will demonstrate understanding of shapes.
  - Demonstrate is not something you can see or hear. It is not observable and measurable.
- [Child] will participate during small group activities.
  - Participating is a collection of skills (e.g., raise hand for a turn, answer 'what' questions about a book, follow 1-step directions at small group). Without additional information 'participate' is too broad. It is not observable and measurable.
- [Child] will respond to group directions.
  - Respond is an action the child will do, but it does not state how the child will demonstrate the behavior (e.g., verbally respond, receptively point/touch/give, move body to another location). It is not observable and measurable.
- [Child] will refrain from hitting.
  - Targets must include an action the child will do, rather than something the child should not do. Not hitting is not an action. It is not observable and measurable. Consider a replacement behavior or skill. For example, if the child hits to obtain objects from peers a target skill might be, "the child will use 1-2 words to request objects from peers."

Why are conditions and criteria important?

Measurable priority learning targets include the conditions under which the behavior will occur and a level of acceptable performance. Specifying the conditions under which the behavior will occur and the level of acceptable performance is called **performance criteria**. Performance criteria specify the level of acceptable performance and how often the child is to perform the behavior to demonstrate he/she has met the criteria (e.g., four times for 3 consecutive days, twice for 5 consecutive days, etc.). Performance criteria also help you to determine how often you need to collect data on a specific priority learning target.

Performance criteria will vary depending on the child's phase of learning (e.g., acquisition, fluency, maintenance, generalization, and adaptation) the priority learning target is developed to address. First, review the definition for each phase of learning.

- **Acquisition-** Learning a new skill
- **Fluency-** Gaining the ability to perform a skill in a continuous or fluid way
- **Maintenance-** Using the same skill over time
- **Generalization-** Using learned skills or behaviors across different settings, people, times, activities, or materials
- **Adaptation-** Using elements of previously learned skills that can be adapted to new demands and situations

Take a look at how priority learning targets for the same target skill (using 1 word or sign to initiate play with a peer) has been changed to reflect different phases of learning.

Acquisition:

Tabitha will use 1 word or sign to initiate play (e.g., sign 'play', say 'play') with **a preferred peer, following a verbal prompt from her teacher** in **center activities 6 times across 4 consecutive days.**

- Here Tabitha is acquiring the skill of using 1 word or sign to initiate play with a preferred peer in one activity with help from her teacher.

Fluency:

Tabitha will independently use 1 word or sign to initiate play (e.g., sign 'play', say 'play'), with **a preferred peer** in **center activities 6 times across 4 consecutive days.**

- Here Tabitha is becoming fluent with using 1 word or sign to initiate play with a preferred peer in one activity without adult help.

Maintenance:

Tabitha will independently use 1 word or sign to initiate play (e.g., sign 'play', say 'play') **with one familiar peer** during **regular child-initiated activities at least 2 times per day for 6 weeks**.

- Here we are evaluating whether Tabitha maintains her ability to use 1 word or sign to initiate play with familiar peers from her class over time in child-initiated activities. Data on her performance could be collected weekly.

Generalization:

Tabitha will independently use 1 word or sign to initiate play (e.g., sign 'play,' say 'play') with **at least two familiar peers** in **small group games and playground activities 6 times in total for 2 consecutive days.**

- Here Tabitha is learning to generalize using 1 word or sign to initiate play with two familiar peers from her class across two activities with different characteristics and levels of structure.

Adaptation:

Tabitha will independently use 1 word or sign to initiate play (e.g., sign 'play,' say 'play,' with **unfamiliar peers** (e.g., from another class). She will initiate play with **at least two unfamiliar peers at resource and playground activities one time each day for one week.**

- Here Tabitha is learning to adapt her ability to use 1 word or sign to initiate play with peers. She is working on this target skill during activities where she has the opportunity to interact with peers from other classrooms who are unfamiliar or less familiar.

What Type of Data Do I Need?

Identifying the features and characteristics of the target skill or behavior will influence the type of data you collect. Different types of data you collect might include:

- Frequency
- Accuracy
- Level of Support
- Duration
- Latency
- Endurance

Each type of data is defined and illustrated through looking at the target behaviors and criterion statements from the priority learning targets below:

Frequency: The number of times a child demonstrates a target skill or behavior within a specified period of time.

The period of time can be an interval (e.g., 15 seconds) or an entire activity/event (e.g., circle, snack, centers). The best way to collect frequency data is by counting it. Examples of target skills for which you might collect frequency data include:

- [Child] will sign “more” three times a day.
- [Child] will use at least 1 word to answer a question about a story three times during circle time.
- [Child] will tap a peer to initiate an interaction two times within a 10-minute observation.
- [Child] will use 3 words to request an object across four daily activities and routines.

Accuracy: The extent to which a child’s behavior matches the targeted performance specified or how well a child demonstrates the target behavior.

To collect accuracy data, you can calculate the percentage of correct trials (# correct behaviors/total # trials). Examples of target skills for which you might collect accuracy data include:

- [Child] will spell his/her first name correctly (e.g., all letters in order).
- [Child] will count 5 objects using 1:1 correspondence.

Level of Support: The amount of assistance a child needs to demonstrate a target skill or behavior.

The way to collect level of support data is to record the level of assistance required for the child to demonstrate the target skill or behavior. This might be done by taking notes or using a rating scale. Examples of target skills for which you might collect level of support data include:

- [Child] will use 2 words to make a request following a model during centers, free play, and outside once a day for five consecutive days.
- [Child] will hang her coat without verbal reminders each day for 1 week.

Duration: The amount of time it takes to complete a priority learning target skill or behavior or the amount of time a target skill or behavior lasts.

The way to collect duration data is by timing how long it takes the child to complete the target skill or behavior or how long the target skill or behavior lasts. Example of target skill for which you might collect duration data include:

- [Child] will stand on both feet, holding onto to a table or chair, without additional adult support for 30 sec.

Latency: How long it takes a child to initiate the target behavior (i.e., response onset) after an antecedent has occurred.

The way to collect latency data is by keeping track of the elapsed time between the antecedent and the onset of the target skill or behavior. Examples of target skills for which you might collect latency data include:

- [Child] will use 2 words to make a request for an object within 10 seconds of being offered a choice of objects.
- [Child] will pick up at least one toy and put it in a designated container within 2 minutes of a teacher saying, “It’s time to clean up,” during centers.

Endurance: How long, how far, or how many times a child can emit a target skill or behavior before she/he fatigues (e.g., how many steps can a child take, how many steps can a child climb, how far can a child walk using a walker).

There are various ways to collect endurance data based on the behavior criteria, such as rating scales, counting, or timing. Examples of target skills for which you might collect endurance data include:

- [Child] will walk 17 consecutive steps without stopping.
- [Child] will pedal a bicycle forward at least 16 feet.

How Do I Collect Data?

After you determine what type of **behavior** you are measuring and have identified the performance **conditions** and **criteria**, you can plan for how you will evaluate child progress.

- Learner: Mia will
- Behavior: request objects using a 1-2 words (e.g., “want ball,” “bowl”)
- Conditions: following a verbal prompt
- Activities: during breakfast, snack, and table games
- Criterion: on 3 occasions each day for five consecutive days.

Data is typically collected relative to the nature of the child behavior and the conditions and criteria reflected in priority learning target. Here are some things to consider:

- If you want to know how often the behavior happens→ count it (frequency)
- If you want to know how accurate the behavior is → calculate % correct (accuracy)
- If you want to know how much support the child needs to do the behavior→ descriptive notes or rating scales (level of support)
- If you want to know how long a behavior lasts or the onset of a response→ time it (duration or latency)
- If you want to describe the behavior (it’s form and topography)→ take notes
- If you want to document or obtain a permanent record of the behavior→ collect products or work samples

How often should I collect data?

Frequency of data collection is determined based on the target skill or behavior. Some target skills or behaviors might only occur once or twice a day while others might occur more often throughout the day. Consider what is feasible given the number of adults and children in the classroom and the demands on your time during particular activities.

It is important to collect enough data to help you decide whether the child is making progress on the priority learning target. We know a child’s performance might vary somewhat from day to day, but the goal is to gather enough data that you have a picture of the child’s “typical” performance. It is helpful to examine your schedule carefully; plan how often it is feasible for you to collect data, while considering how much data you will need to obtain a picture of the child’s “typical” performance. Planning for data collection ensures you devote a sufficient amount of time to these important evaluation activities.

Embedded instruction occurs daily across activities, routines, and transitions. Data collection is likely to occur at specific times during the week using probes. Plan and schedule to collect probe data based on what you want to know about the child's performance of the target skill or behavior.

When should I collect data?

Deciding *when* to collect data on child behaviors involves four considerations:

- When the skill is being taught—For some phases of learning, you might want to collect data during the activities in which you plan to teach the target skill or behavior. For other phases of learning (e.g., generalization), it might be more useful collect data in activities where you do not plan to provide embedded learning opportunities.
- When the child naturally needs to be able to use the skill—Measuring whether the child is able to do the target skill or behavior during when it is needed to participate meaningfully in an ongoing activity, routine, or transition will give you important information about the child's use of the skill or behavior in context.
- When the behavior is most likely to occur—When possible, it is important to collect data during times when the child is likely to have multiple opportunities to practice the target skill or behavior.
- What conditions and performance criteria are specified—If you have specified the child must demonstrate the target skill or behavior in multiple activities, such as arrival, centers, and snack, you should collect a sample of data from each of these activities to see if a child is consistently demonstrating the target skill behavior across different settings.

Where should I collect data?

The activities *where* data collection should occur depend on whether the child is acquiring a skill, becoming fluent with the skill, maintaining the skill, generalizing the skill, or adapting the skill. For example:

- If the child is *acquiring* a skill, it will be important to collect data on the child's use of the skill in the activity in which the child is learning the skill.
- If you want to know if a child is *fluent* with a skill, collect data during authentic opportunities for the child to use the skill.
- If you are interested in determining if the child *generalizes* the skill across activities, you might want to collect data in an activity in which instruction is not targeted, but which represents a context in which the skill would be functional.

Who should collect data?

It is also important to designate *who* will be collecting the data. It will be important to make a data collection schedule. This can be done in a variety of ways. For example, you could make a matrix that is primarily a data collection matrix – combining all of the decisions you made for data collection. The data collection matrix specifies who collects the data, during what activities, and on what days. An example of a data collection matrix can be seen on the next page.

Schedule	Mia	Matthew
Arrival		
Morning Activity/Free Play	Name colors **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 **Teacher-M, T, W**	Hold marker/paintbrush and make markings on paper **Teacher-Daily**
Departure		
Transitions		

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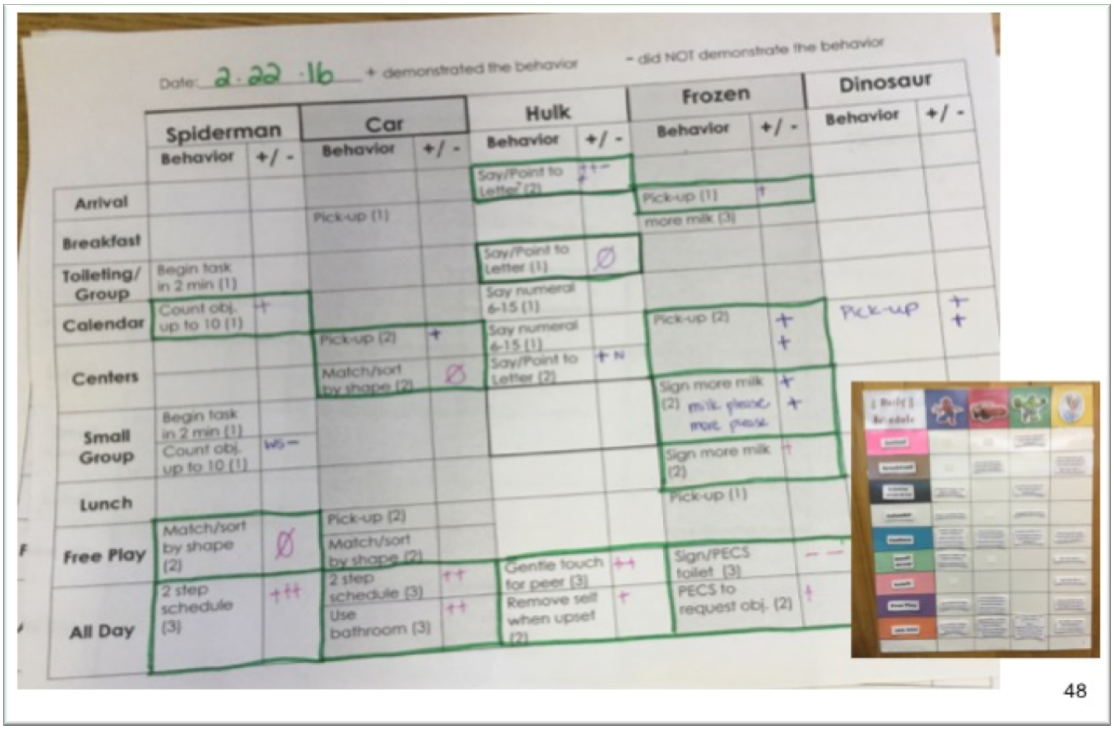
For this data collection matrix, the team has planned which member of the team will collect data on each target skill, for each day of the week. For example, the assistant will collect data on whether or not Mia is able to name colors during Morning Activity/Free Play on Monday, Tuesday, and Wednesday.

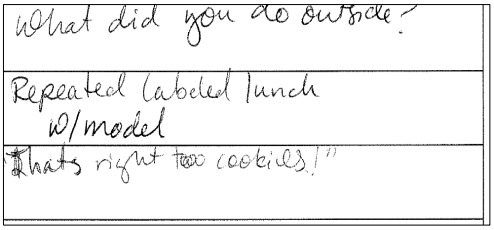


For this data collection matrix, the team has planned which member of the team will collect data on each target skill for the week. The special education teacher will collect data on all of the targets in the green boxes. She will use a different colored pen each day to indicate the day of the week. The general education teacher also has a clipboard where the other target skills are highlighted with blue boxes.

Displaying and Analyzing Data

Selecting an appropriate way to display the data will depend on what you would like to know. You might use an outline of written notes, tables, or graphs. Research suggests graphing is an effective way to display data. When we use graphs, we are able to describe the child's performance and progress and make predictions about future performance. Different graphs can also help us identify relationships between the child's performance and other variables (e.g., activities or time of day).

An Outline of Written Notes



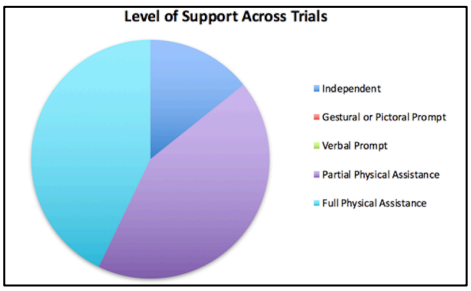
Tables with Tally Marks

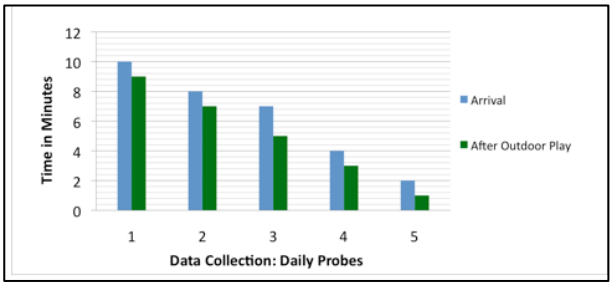
Activity or Routine	Level of Support			
	I	V	PP	FP
Snack		✓✓	✓	
After Outside			✓✓	✓
Lunch	✓	✓✓		

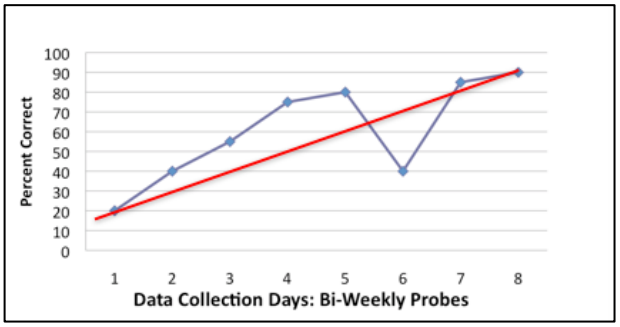
I = independent V = verbal prompt
PP = partial physical prompt FP = full physical prompt,

	Activity	Occurrences	Total
10/20/2009 Time: 9:00-9:15	Center time	////	4
10/20/2009 Time: 10:30-10:45	Outdoor play	//	2
10/20/2009 Time: 11:20-11:40	Lunch		

Graphic Displays (e.g., pie chart, bar graph, line graph)







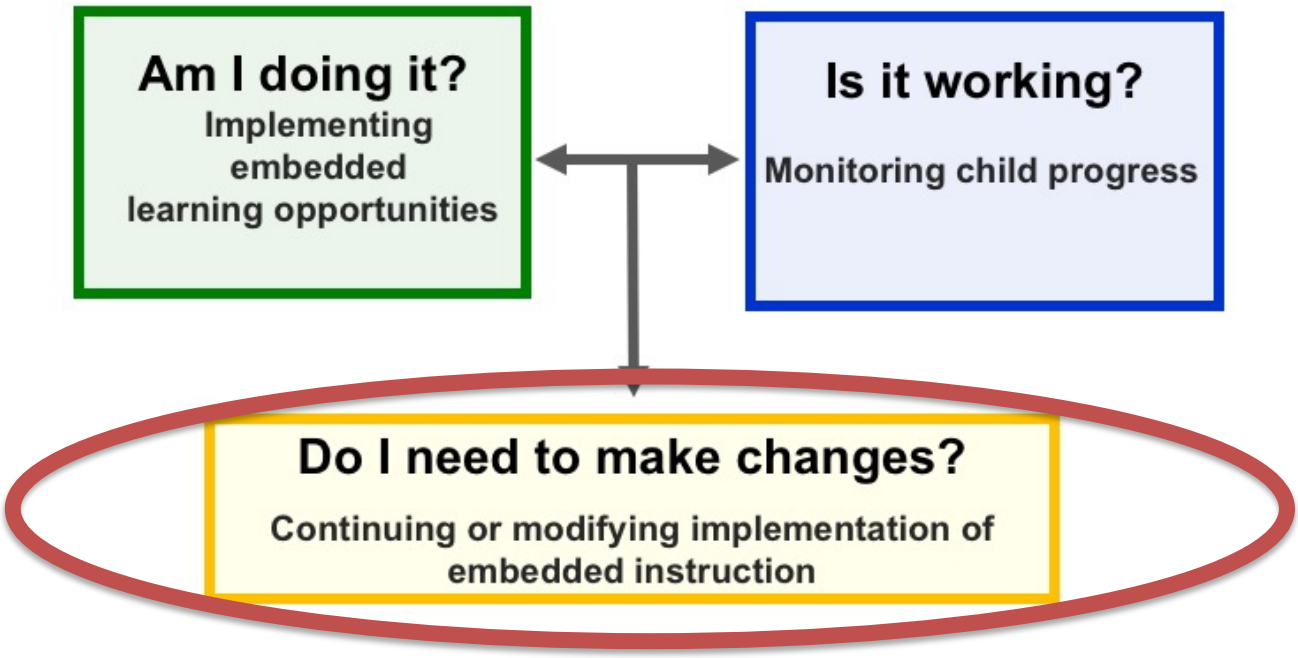
When deciding how to display data, consider with whom you will be sharing the data. If your main purpose is to share the data with the child's family, consider which display will be the clearest and most helpful for them to understand their child's progress.

Depending on how data is collected and displayed, it can provide information about a variety of different aspects of the child's progress. Here are some questions data can help us answer:

- How often does the child perform the behavior?
- How accurately does the child perform the behavior?
- Which behavior(s) does the child do independently?
- What types of supports, adaptations, or assistance does the child need to perform a specific behavior?
- How long does the child perform the behavior?
- Is the child making progress?
- What influences child performance?

Do I Need to Make Changes?

The diagram below shows the relationship between "*Am I doing it*?" and "*Is it working*?". Answering these two questions helps you decide whether you should continue with or revise your implementation of embedded instruction— "*Do I need to make changes?"*



Continuing or Modifying Implementation

You need to evaluate how well *you* are implementing embedded instruction before determining if embedded instruction is working for the child.

You might learn you have not implemented embedded instruction in the planned activities, or as frequently as you planned. You might also learn the trials you are implementing are not implemented with fidelity (i.e., they do not include the A-B-C components of complete learning trials). This suggests you need to work on implementing embedded instruction consistently and with fidelity.

If you have implemented embedded instruction consistently as planned and with fidelity, but the child is not making progress, you might need to adjust your implementation of some of the components of complete learning trials to fit the child's phase and pace of learning.

If the child is making progress, you may continue implementing embedded instruction as you have been or choose to develop a new priority learning target and/or instructional plan.

Using both sources of evaluation data (i.e., *Am I doing it?* and *Is it working?*) is necessary for making data-informed decisions about whether changes are needed.

What to Do If the Child has Reached the Priority Learning Target Criterion

You might adjust the performance criteria by considering the different phases of learning (i.e., acquisition, fluency, maintenance, generalization, and adaptation). For example, if the data indicates the child has met the performance criteria with respect to acquisition, you might change the criteria to reflect fluency.

Another option is to increase the complexity of the target skill. For example, you might have the child make 3-word requests rather than 1-word requests.

You might decide to write a new priority learning target, if the child has met criteria for the specified target skill. This decision will be based on the child's IEP goals and activity-focused assessment data about what additional skills the child needs to learn to be engaged and to access and participate in the early learning environment.

What to Do If the Child is Making Progress

If the child is making progress at a sufficient rate, continue to implement the number of planned embedded learning opportunities during activities specified in the priority learning target and on the activity matrix.

Monitor the child's progress on the target skill in relation to the specified conditions and criterion statement.

What to Do If the Child is Not Making Progress

If the child's data shows he/she is not making progress, here are some things to consider:

Look at the implementation data you collected:

- Examine the number of embedded learning opportunities you actually delivered
- Compare the number of complete learning trials delivered to the number of incomplete learning trials

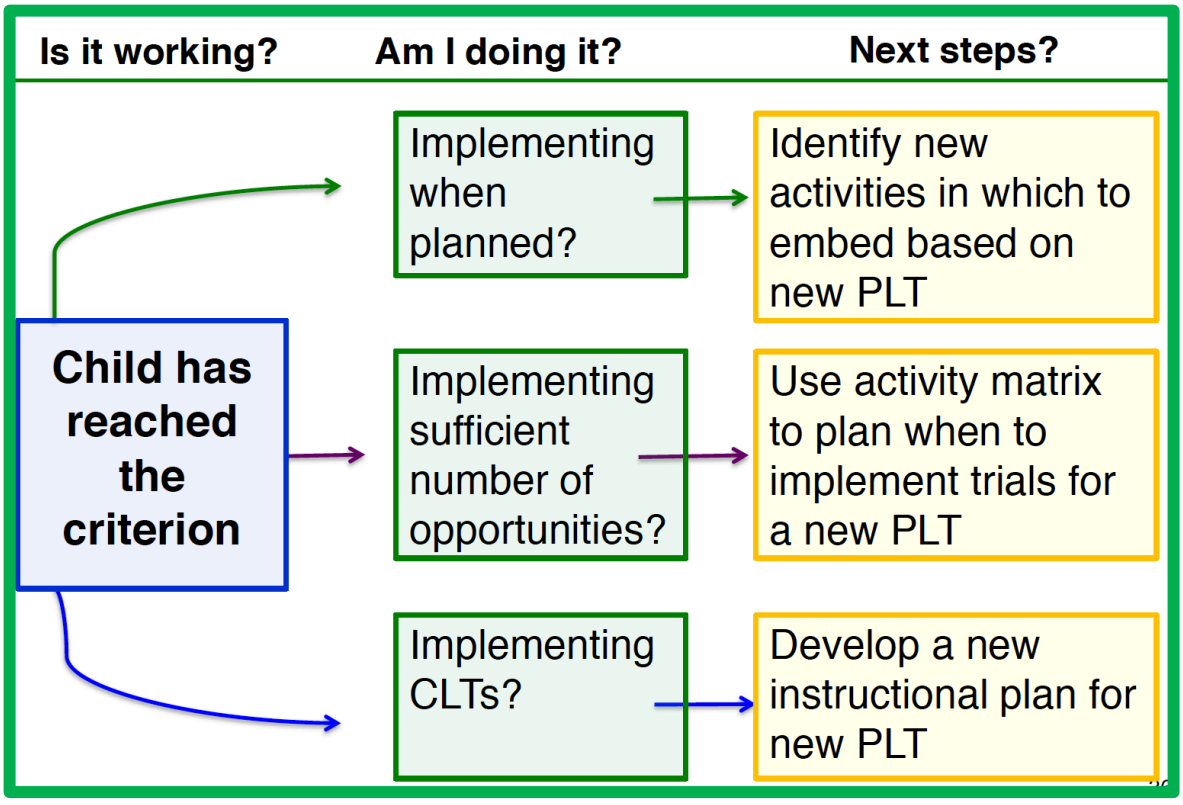
Revisit your instructional plan. Changes you might consider are:

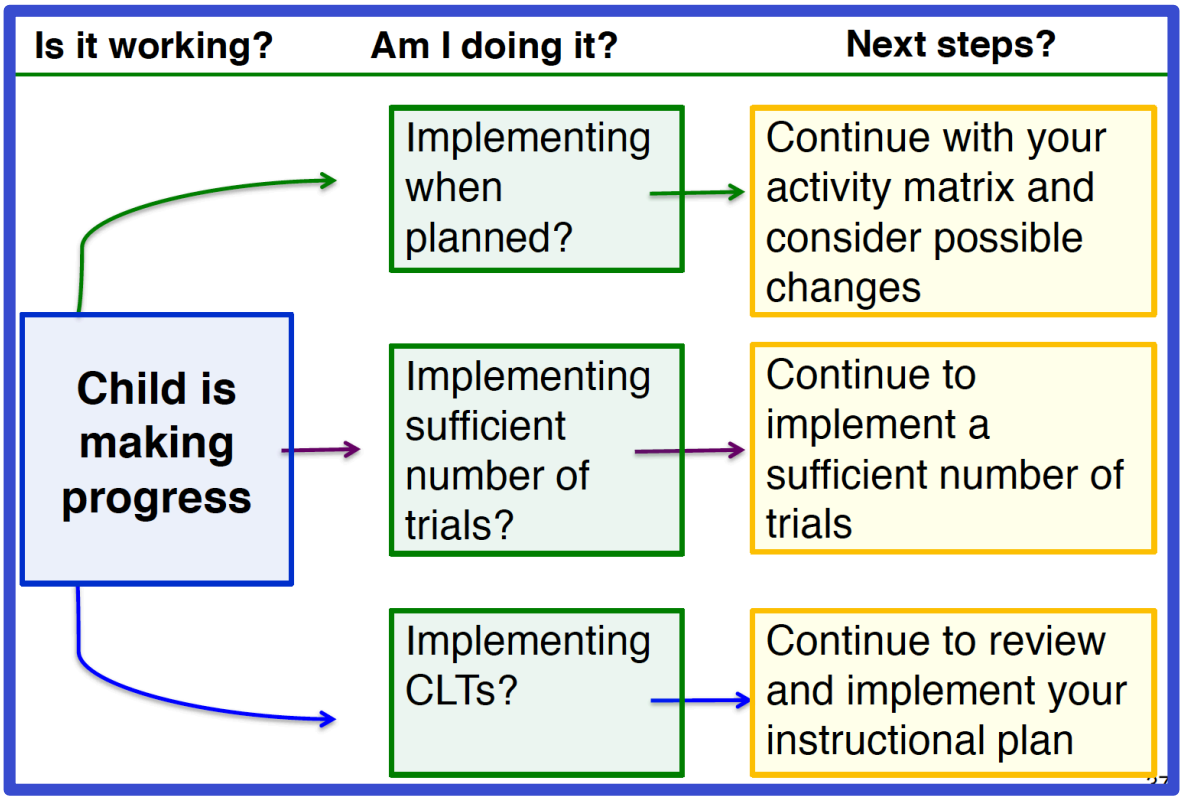
- Adjusting the number of embedded learning opportunities planned for the priority learning target or activity
- Changing the target skill (e.g., if the target skill is too hard for the child, consider breaking it down into smaller steps or a more achievable behavior)
- Changing antecedents or consequences
- Changing accommodations, modifications, or instructional procedures
- Changing the type or timing of prompts
- Changing the activities in which you embed learning trials
- Changing the instructional context by considering the peers and materials involved

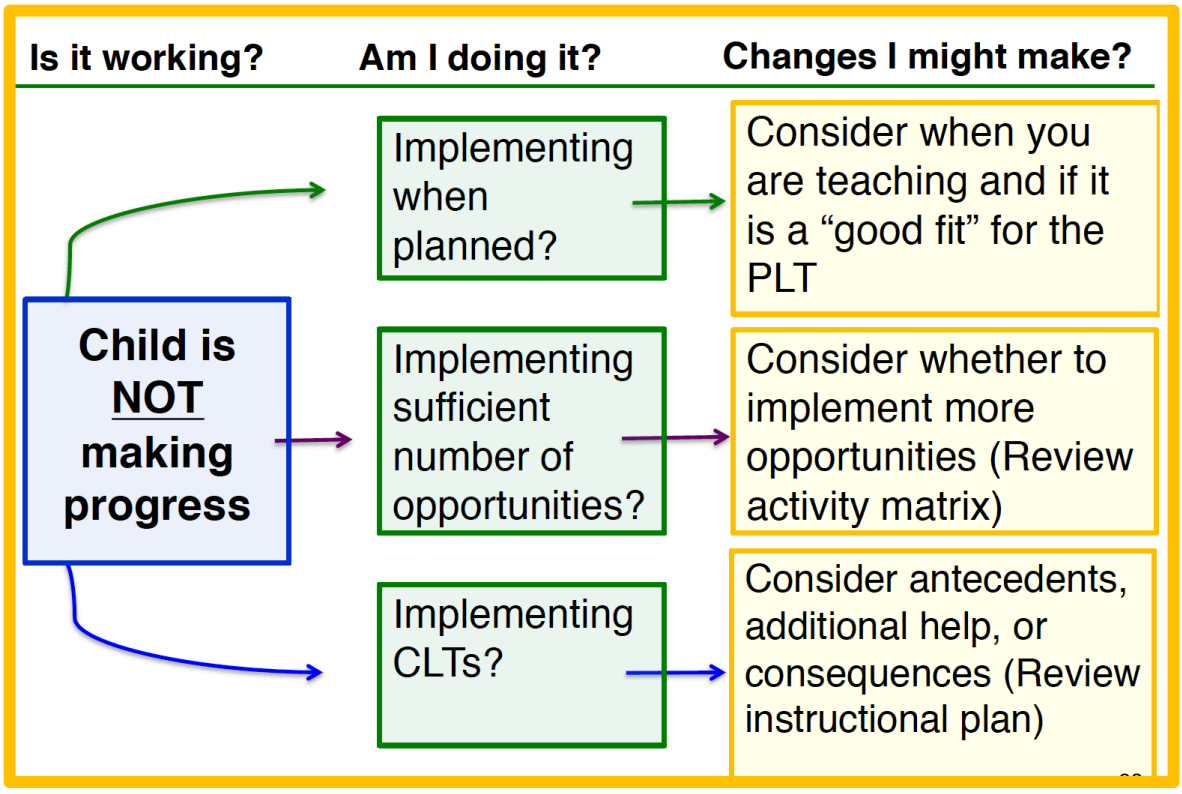
Closely examine days when the child is more responsive:

- Reconsider the child's preferences for times of day, activities, materials, or certain peers that may make a difference in his or her response
- Think about differences in the way you delivered trials on days that the child was more responsive

If the child…	Then…
Has reached the criterion	Move on to the next step or a new target skill
Is making progress	Continue with what you have been doing
Is <u>not</u> making progress	Change how or what you are teaching







Examples of Data-Informed Decision Making

This section illustrates the data-informed decision making process for six types of *Is it working?* data. Each case begins with an example priority learning target, followed by an illustration showing how you might collect and display data to consider the three key evaluation questions. Types of data described in this section include:

- Frequency Data
- Accuracy Data
- Level of Support
- Duration Data
- Latency Data
- Endurance Data

Frequency Data

Frequency data gives information about the number of times a child demonstrates a target skill or behavior within a specified period of time. The period of time can be an interval (e.g., 15 seconds) or an entire activity/event (e.g., circle, snack, centers).

Example Priority Learning Target

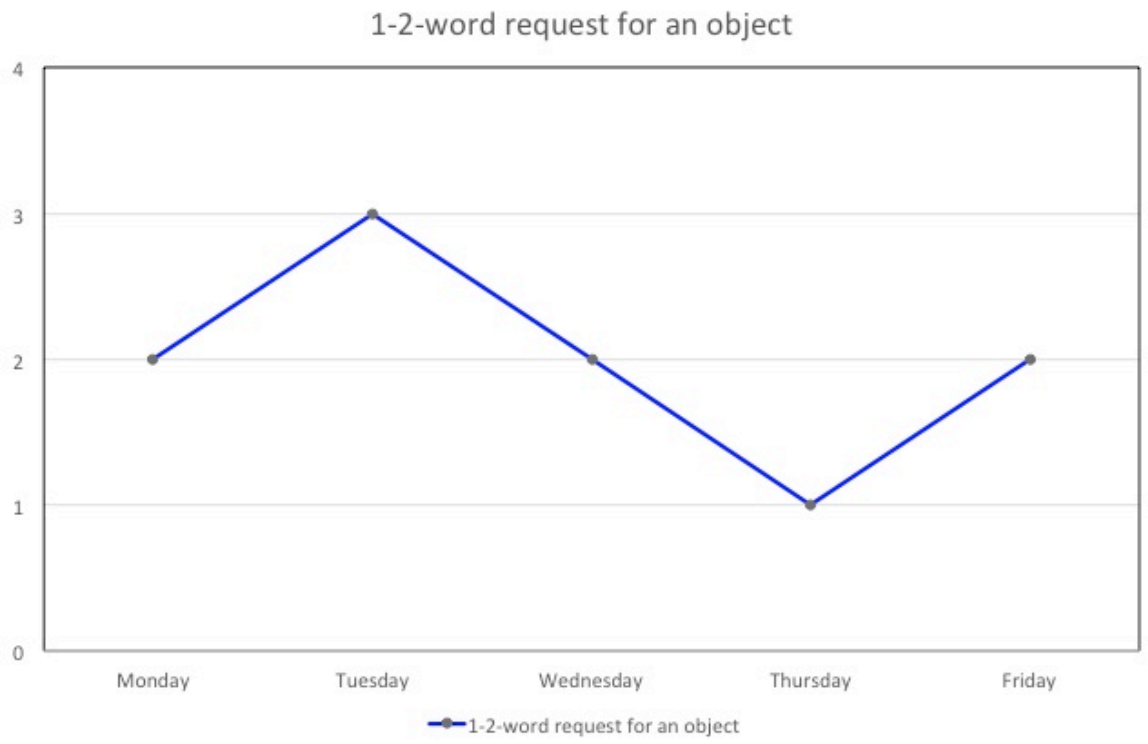
Mia will independently request objects using 1-2 words (e.g., “want ball,” “bowl”) during breakfast, snack, and table games on 3 occasions each day for five consecutive days.

Collect Data

Day	Activity	Count
Monday	*Breakfast*	/
	Snack	
	Table Games	/
Total		2
Tuesday	*Breakfast*	/
	Snack	/
	Table Games	/
Total		3

Day	Activity	Count
Wednesday	*Breakfast*	/
	Snack	
	Table Games	/
Total		2
Thursday	*Breakfast*	
	Snack	
	Table Games	/
Total		1
Friday	*Breakfast*	
	Snack	/
	Table Games	/
Total		2

Display Data



Interpret Child Performance Data (*Is it working?*)

When you look at Mia's performance over the week, you see there is variability in the number of times she performed the target behavior each day. You can also see she is not meeting the criteria of 3 occasions each day for five consecutive days.

Interpret Data on Your Implementation (*Am I doing it?*)

Your assistant teacher has collected the data on your implementation and, together, you review it to see if the quality of implementation is affecting Mia's performance. When you look at the data, you determine you are delivering the planned number of learning trials and they are complete learning trials.

Make a Decision (*Do I need to make changes?*)

Where should you go from here? You have implemented embedded instruction with fidelity, but Mia is still not making progress toward the priority learning target. At this point, you should revisit your plan and make some changes.

On your instructional plan, you have designated the antecedent to be visible materials and an expectant look. When you review Mia's performance, you decide the antecedent does not consistently elicit the targeted behavior. For the following week, you decide to change your instructional plan to give Mia a choice paired with a visual prompt for the antecedent (e.g., "Mia, do you want goldfish or pretzels?" [show snack]). You will continue to collect data on your implementation of embedded instruction (*Am I doing it?)* and Mia's performance (*Is it working?*) to see if this new plan will work.

Accuracy Data

Accuracy data reflects the extent to which the child performs the behavior correctly or how well the child demonstrates the behavior. Accuracy can be measured by percent of correct demonstrations.

Example Priority Learning Target

Davion will count sets of up to 3 moveable objects (e.g., blocks, toy cars, crackers) using 1:1 correspondence when asked by an adult, during centers, free play, and snack for 80% of the opportunities across a day for two consecutive days.

Collect Data

In order to measure the accuracy with which Davion is performing his target behavior, you must determine the performance standard. In this case, there are two pieces of information required to make this determination:

Is he performing the behavior indicated within the priority learning target?

- Count sets of up to 3 moveable objects using 1:1 correspondence

Is he performing the behavior to the criterion indicated in the priority learning target?

- 80% of opportunities across a day for two consecutive days

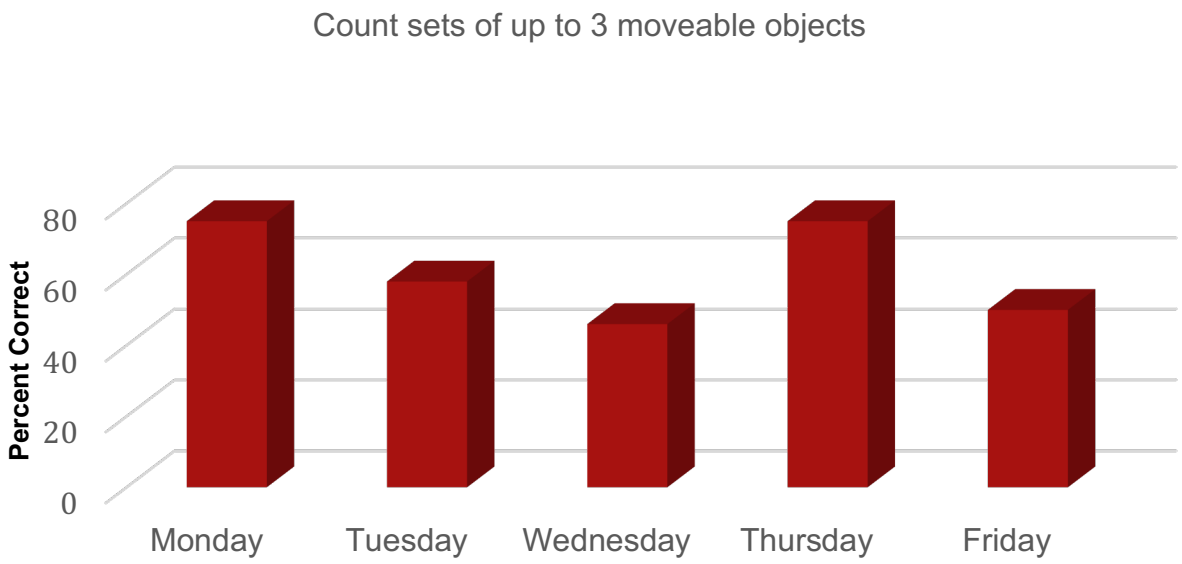
To measure accuracy, you can examine the percentage of correct behaviors observed. One way to do this would be to make a table that allows you to record the number of times Davion has an opportunity to perform the behavior and the number of times Davion performs the behavior according to the criteria specified in his priority learning target.

For example, the following table might be used to collect data:

Days	Activity	Target Behavior	Opportunities	Proportion and Percentage
Monday	*Centers*	*///*	*/////*	*3/5 = 60%*
	Free play	*////*	*////*	*4/4 = 100%*
	Snack	*//*	*///*	*2/3 = 67%*
Total		*9*	*12*	*75%*
Tuesday	*Centers*	*/*	*////*	*1/4 = 25%*
	Free play	*//*	*////*	*2/4 = 50%*
	Snack	*////*	*////*	*4/4 = 100%*
Total		*7*	*12*	*58%*
Wednesday	*Centers*	*/*	*////*	*1/4 = 25%*
	Free play	*/*	*////*	*1/4 = 25%*
	Snack	*////*	*/////*	*4/5 = 80%*
Total		*6*	*13*	*46%*
Thursday	*Centers*	*///*	*///*	*3/3 = 100%*
	Free play	*///*	*////*	*3/4 = 75%*
	Snack	*///*	*/////*	*3/5 = 60%*
Total		*9*	*12*	*75%*
Friday	*Centers*	*//*	*////*	*2/4 = 50%*
	Free play	*//*	*////*	*2/4 = 50%*
	Snack	*//*	*////*	*2/4 = 50%*
Total		*6*	*12*	*50%*

Display the Data

Once you have collected data across multiple activities and days, you can display the data to determine the accuracy with which Davion is performing the target behavior.



Interpret Child Performance Data (*Is it working?*)

Data on the percentage of opportunities for which Davion correctly counted sets of up to 3 moveable objects using 1:1 correspondence shows he has not yet demonstrated the target behavior in 80% of opportunities presented across a day for 2 consecutive days. His performance on Monday and Thursday was up to 75%, but it was inconsistent throughout the week for this priority learning target. To identify possible reasons for the variability in Davion's performance, it is important to review your implementation and the activities in which you embedded your instruction.

Interpret Data on Your Implementation (*Am I doing it?*)

You find that Davion demonstrated the target behavior most accurately during snack time, but there were some days where his accuracy was higher in centers or free play. After collecting data on your implementation of complete learning trials with Davion, your coach told you that when you were sitting next to him and providing systematic opportunities for him to practice, all of the embedded learning opportunities you delivered were complete learning trials. She noted that during centers and free play, you continued to deliver embedded learning opportunities, but there were times when Davion did not demonstrate the target behavior and you did not provide additional help because you were interacting with other children. On the days you provided additional help, the percent of trials in which the target behavior occurred was higher.

Make a Decision (*Do I need to make changes?*)

Based on the evaluation data from both your implementation and Davion's performance of the target behavior, you may decide to pay closer attention to Davion's behavior and to deliver additional help when he does not demonstrate the behavior during centers and free play. Your correct implementation will help Davion improve his counting and generalize it to the other settings. You may also review your activity matrix and decide to distribute trials more across activities and routines, so Davion has more opportunities to practice counting during activities and routines that are meaningful to him and feasible for you and your team.

Level of Support

Data on level of support tell us how much assistance a child requires (e.g., independently, without support, with hand-over-hand) to do a target skill or behavior.

Example Priority Learning Target

Matthew will hold a marker or paintbrush and make marks on a piece of paper during art activities at table games and centers. Matthew will make at least 6 marks in one activity each day for four consecutive days.

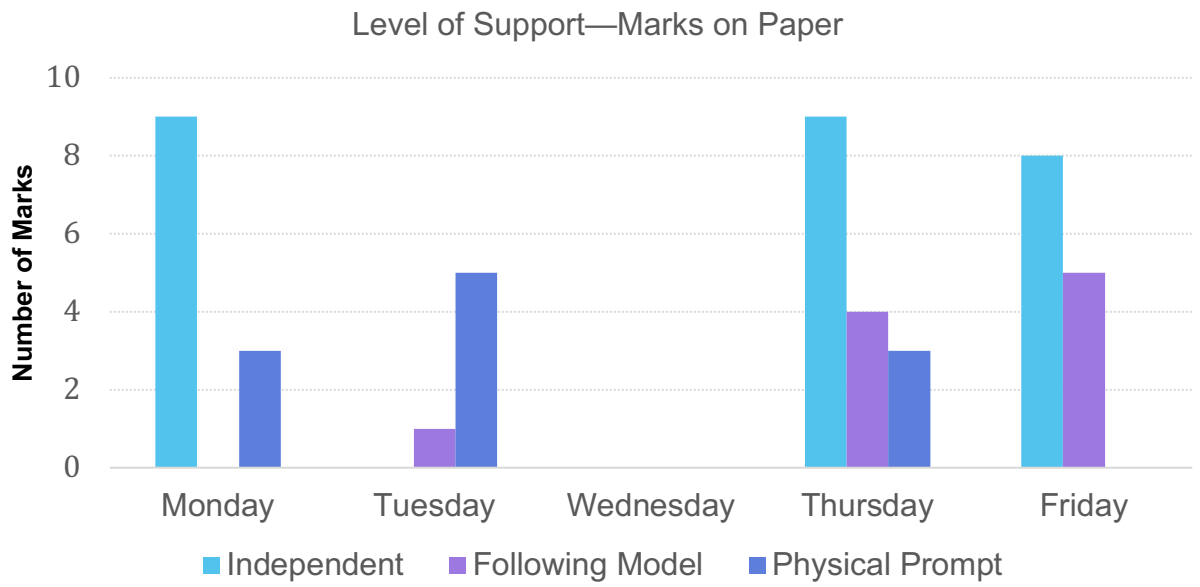
Collect Data

In this example, the criterion statement suggests it would be important to collect data on the number of marks Matthew makes (i.e., frequency). In addition, his target does not specify he will make marks with assistance, so you might be interested in knowing how many marks Matthew makes independently in comparison to the number of times he needs assistance to make marks. You may use a simple system composed of tallies or a checklist. Alternatively, you could develop a code for recording the level of support provided. Your data collection sheet may look as follows:

Day	Activity	Performance I= Independent M= Following Model P= Physical Prompt	Independent Responses
Monday	*Table Games*	**P P P I I I**	**3/6**
	Centers	**I I I I I I**	**6/6**
Total			9/12
Tuesday	*Table Games*	**M P P P P P**	**0/6**
	Centers	*Went home sick*	*NA*
Total			0/6

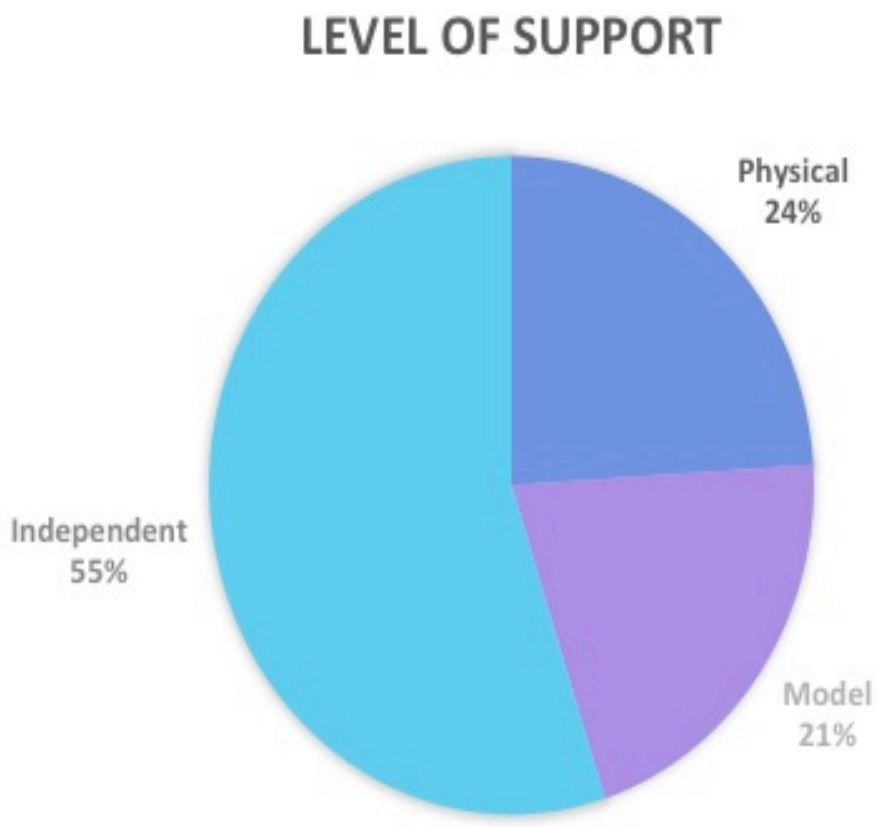
Day	Activity	Performance I= Independent M= Following Model P= Physical Prompt	Independent Responses
Wednesday	*Table Games*	*Absent*	*NA*
	Centers	*Absent*	*NA*
Total			N/A
Thursday	*Table Games*	**P P M M M M P**	**0/7**
	Centers	**I I I I I I I I I**	**9/9**
Total			9/16
Friday	*Table Games*	**M M I I M I**	**3/6**
	Centers	**M M I I I I I**	**5/7**
Total			8/13

Display Data



Interpret Child Performance Data (*Is it working?*)

You examine the total number of marks made per day and what level of support was provided. You also examine what percentage of total marks across the week were made independently, with a model, or with a physical prompt. From this data, you conclude Matthew is making progress toward his target behavior, but has not mastered it yet. On Monday and Thursday, he independently demonstrated the target behavior during centers, but he required additional help (e.g., following a model or physical prompt) for half or more of his opportunities in art activities at table games. He went home early on Tuesday and did not come to school Wednesday. You decide you will need to collect more data next week.



Interpret Data on Your Implementation (*Am I doing it?*)

The data you collected by viewing video footage of your implementation of embedded instruction during table games and centers showed 100% of your learning trials were complete learning trials. You provided opportunities for Matthew to demonstrate his target behavior and implemented the components of complete learning trials with fidelity. In fact, you provided more trials than planned during some activities!

You also looked back at your lesson plans and noticed Matthew prefers to paint and typically only uses markers when the easel is available.

Make a Decision (*Do I need to make changes?*)

Data you collected about Matthew's performance on the target behavior indicates he is making progress. Data collected on your performance indicates you are delivering complete learning trials. This information might lead you to decide to keep working on the same behavior in the coming week without making any adjustments to your implementation. Or perhaps you might try a modification to promote his independence during art activities at table games by providing an inclined surface for Matthew to enhance the position of his arm at the table when he is using markers or paintbrushes.

Duration Data

Duration data reflect the length of time it takes to complete a target skill or behavior. Duration can be expressed as:

- Total duration
- Duration per occurrence of behavior
- Percent of time (50% of total time)

Example Priority Learning Target

Lily will complete a 1-step direction related to the classroom activity within 1 minute (e.g., hang up backpack, go to the table, line up) of hearing the direction. She will do this when verbally directed by an adult during arrival, morning activity, and breakfast for 4 out of 5 opportunities provided each day for 1 week.

Collect Data

In this example, you have specified the activities where Lily must follow a 1-step direction and made sure to collect data during these activities. There is space to indicate what activity Lily is participating in on the data collection form. This information may be important when analyzing the data later. You have completed the data collection form as follows:

Student: *Lily* **Date:** *Wednesday* **Activity:** *Arrival*

The data collection form shows data for one day; however, you will collect data each day of the week during different activities, as noted in the priority learning target.

Direction	Time (in minutes)					Notes
	1	2	3	4	5	
Teacher: "Lily, sign in."	-	+ AH				*Gestural prompt from mom*
Teacher: "Lily, hang up your backpack."	-	-	-	+ AH		*Watches other children unpack; Hand-over-hand*
Paraprofessional: "Lily, point to what you want for lunch."	-	+ AH				*Gestural prompt from paraprofessional to point to a visual cue card with lunch choice*
Teacher: "Lily, go to the sink."	+					*Teacher touches shoulder and points when direction is provided*
Teacher: "Lily, go to the carpet."	+					*Teacher touches shoulder and points when direction is provided.*

–
Desired behavior did not occur in this minute

+
Desired behavior did occur in this minute

AH
Additional Help

Display Data

Interpret Child Performance Data (*Is it working?*)

In the graph above, you compiled data each day of the week. First, you should look at whether Lily has reached the criterion, "complete a 1-step direction within 1 minute for 4 out of 5 opportunities provided each day for 1 week."

The graph shows she reached her goal on Thursday. Lily has accomplished the first part of the criterion, which was complete a 1-step direction within 1 minute. However, the second part of the criterion is that she maintains the behavior for 5 consecutive days. She has only reached the criterion once.

Interpret Data on Your Implementation (*Am I doing it?*)

You think about whether something different occurred on Thursday that may have helped Lily achieve the criterion.

- Did you deliver more learning trials on these days compared to other days? No
- Did you deliver more correct learning trials on these days? No
- Did you spend more time with Lily? No
- Did you deliver the antecedent differently? Yes
- Was the activity or consequence more rewarding for Lily? Not sure

The data collection notes you recorded on Wednesday show Lily was able to complete 1-step directions within 1 minute when a physical prompt (i.e., touched shoulder and pointed in the direction provided) was provided with the natural cue (i.e., Lily, go to the sink. Lily, go to the carpet). On Thursday you also used a natural cue plus a prompt for each trial and she demonstrated the behavior on 4 out of 5 opportunities.

Make a Decision (*Do I need to make changes?*)

You decide to modify the instructional plan and your implementation for next week—pairing a physical prompt with the natural cue (verbal direction).

Latency Data

Latency data reflects how long it takes a child to initiate the target skill or behavior (i.e., response onset) once an antecedent has occurred (i.e., prompt or stimulus is presented).

Example Priority Learning Target

When an adult gives a group or individual directive/request (e.g., “Put your toys away,” “Time to clean up,” “Please put on your coat,”) during transitions, Kiera will respond by beginning to do the task requested **within 1 minute of the direction/request**, at least 4 times a day for five consecutive days.

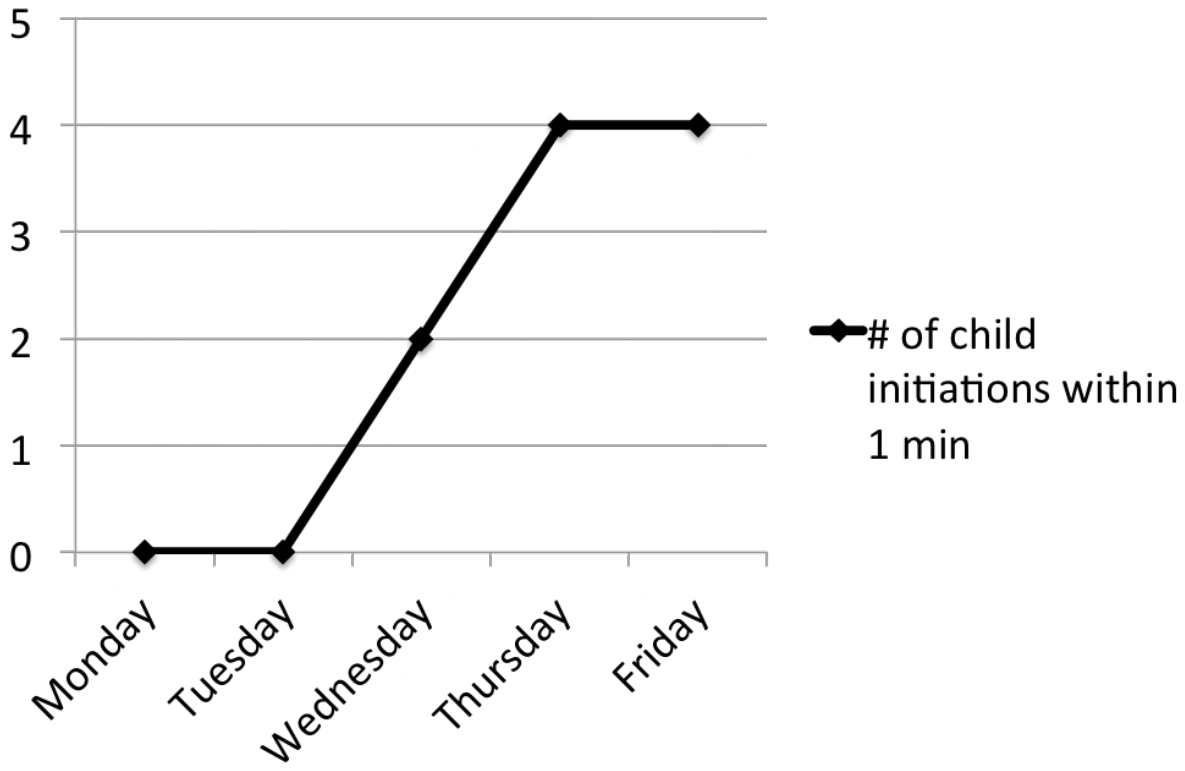
Collect Data

For this behavior, you might count the number of times Kiera does the behavior (e.g., begins to pick up a toy) within 1 minute of the direction/request (antecedent) or you might collect data on how much time elapses from the antecedent to the time Kiera begins to do the task indicated in the antecedent. The table below shows both of these types of data.

Data Collection Form

Days of the Week	Embedded Learning Opportunity Seconds to **initiate** target behavior						Summary Total # of responses within 1 minute
	1	2	3	4	5	6	
Monday	*87*	*96*	*82*	*81*	*79*	*90*	*0*
Tuesday	*65*	*75*	*73*	*75*	*78*	*71*	*0*
Wednesday	*61*	*58*	*66*	*59*	*69*	*70*	*2*
Thursday	*55*	*58*	*58*	*66*	*64*	*60*	*4*
Friday	*72*	*66*	*60*	*60*	*54*	*58*	*4*

Display Data



Interpret Child Performance Data (*Is it working?*)

The data shows that although Kiera did not perform the behavior at criterion level in the first 3 days of the week, she had 4 behavior initiations within 1 minute following a teacher direction on Thursday and Friday. There is an increasing pattern, which suggests she is making progress toward mastering the priority learning target and meeting the criterion of "4 times a day for five consecutive days."

Interpret Data on Your Implementation (*Am I doing it?*)

Data collected on your delivery of learning trials shows you delivered learning trials correctly 90% of the time. However, you also noticed that for some trials on Monday and Wednesday, you did not wait 1 minute to allow her to begin to perform the behavior before providing a physical prompt.

Make a Decision (*Do I need to make changes?*)

This child performance data shows Kiera is making progress toward acquiring the skill. However, you only have 2 data points at the criterion level in the current week. Therefore, you need to continue to collect data on the same skill in coming week(s). It will also be important to pay attention to the amount time (1 min) you provide her to initiate a response after your task direction/request.

Endurance Data

Endurance data shows how long, how far, or how many times a child can emit a target behavior before she/he fatigues. Endurance data helps address a child's "capacity" to perform a target behavior.

Example Priority Learning Target

With the assistance of her walker, Shaira will take 15 steps (e.g., on the playground, from one building to another, leaving or walking to the bus) without stopping to take a break. She will do this four times over the course of two days.

Collect Data

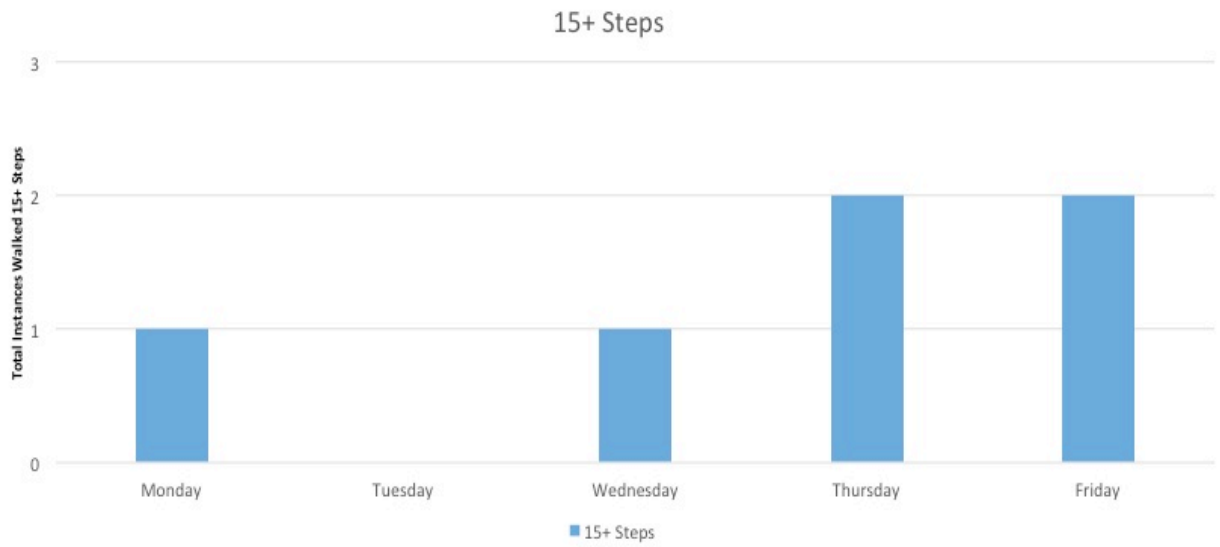
To collect data on this target you can create a distance scale shown in the data collection form below.

Key: Complete the table below by assigning a numeric value to the behavior.

0*= *0-4 steps ***1*= *5-9 steps*** ***2*= *10-14 steps*** **3=** *15 steps+*

Time of Day	Monday	Tuesday	Wednesday	Thursday	Friday
Leaving bus	0 1 **(2)** 3	0 1 **(2)** 3	0 **(1)** 2 3	0 1 2 **(3)**	0 1 2 **(3)**
To lunch	0 **(1)** 2 3	0 **(1)** 2 3	0 1 **(2)** 3	0 1 2 **(3)**	0 1 **(2)** 3
To recess	0 1 2 **(3)**	0 1 **(2)** 3	0 1 **(2)** 3	0 **(1)** 2 3	0 1 **(2)** 3
To class	0 **(1)** 2 3	0 **(1)** 2 3	0 **(1)** 2 3	0 **(1)** 2 3	0 1 2 **(3)**
To bus	**(0)** 1 2 3	**(0)** 1 2 3	0 1 2 **(3)**	0 1 **(2)** 3	0 **(1)** 2 3
Total 3's circled	***1***	***0***	***1***	***2***	***2***

Display Data



0= *0-4 steps* ***1=*** *5-9 steps* ***2=*** *10-14 steps* ***3=*** *15 steps+*

Interpret Child Performance Data (*Is it working?*)

According to the scale, a score of 3 indicates Shaira walked 15 steps (or more) without stopping, when her walker was accessible. You totaled how many times this happened each day and graphed it. Looking at the graph, it is clear that Shaira reached the criterion of walking at least 15 steps four times across two days (i.e., Thursday and Friday).

Interpret Data on Your Implementation (*Am I doing it?*)

Looking at the data you collected on your implementation, it is clear that you have been delivering all of the complete learning trials that you have planned.

Make a Decision (*Do I need to make changes?*)

Where do we go from here? Just because the child has achieved this priority learning target does not mean that you no longer need to embed learning opportunities! It is time to write a new priority learning target. One idea is to use the original priority learning target as the beginning foundation and increase the performance criterion, either by extending how many consecutive days you would like to see the behavior occur or by increasing the number of steps you would like her to walk without stopping. You should also consider whether another target skill or behavior is a higher priority for you to focus on for the next few weeks, while continuing to support the maintenance of Shaira's ability to use her walker to move from place to place.

Learning Trial Implementation Quality Checklist

Review data to determine if trials were implemented correctly. Check for the features described in the table below.

Features		Criteria
✓	Did you implement **complete** learning trials?	Each learning trial has an antecedent, a behavior, additional help (if needed), and a consequence or feedback.
✓	Were all the materials needed to implement the planned **antecedents** available?	All materials needed are available and are placed strategically in the classroom where they will be used.
✓	Were the **antecedents** appropriate?	Antecedents were appropriate to elicit the priority learning target behavior, matched the child's phase and pace of learning, and fit naturally into the ongoing activity.
✓	Did the priority target skill or **behavior** occur?	The child performs the behavior as expected, either following the antecedent or with additional help.
✓	If an **additional help** (prompt) was provided, were the steps of the procedure followed correctly? Was it helpful?	The additional help (prompts) should help the child perform the targeted behavior. Check to see if too much or too little help was provided for the child as part of the antecedent or the additional help.
✓	Were planned **consequences** delivered?	Consequences should occur immediately after the target behavior. Consequences should be appropriate for the child and fit into the on-going activity.
✓	Was **feedback** provided?	If the target behavior did not occur after additional help was provided, it is important to provide feedback that tells or shows the child what behavior was expected.

Data Collection Strategies

These tips are provided to give you ways to think about collecting data. They can be used to collect data on your implementation of embedded instruction (*Am I doing it?*) and to monitor your target child's progress (*Is it working?).*

Pocket Counting: Transfer pennies or other small objects from one pocket to another each time a target behavior is observed or a complete learning trial is delivered. Count the number of pennies transferred to measure the ***frequency*** of the target behavior or complete learning trials.

Empty Jar: Drop pennies or other small objects into a jar each time a target behavior occurs or a complete learning trial is delivered. Count the number of pennies in the jar to measure the ***frequency*** of the target behavior or complete learning trials.

Masking Tape or Wide Rubber Band on Wrist: Write the names and target behaviors on masking tape or on rubber bands placed around your wrist. Record slash marks next to the appropriate behavior. Or, make slash marks on the masking tape or rubber band each time a complete learning trial is delivered. At the end of class, count the slash marks for a ***frequency*** count. You might also wear thin rubber bands of different colors for each priority learning target, move the bands from one wrist to the other as the trials are implemented or behaviors are observed.

Clipboards: Clipboards can be organized so there is a separate clipboard for each target behavior, a separate clipboard for each child with priority learning targets, or a clipboard for each center or area in which data is collected. Clipboards can also hold charts for collecting data on the teachers' implementation of embedded instruction. Pre-made data collection forms or paper for anecdotal notes can be on the clipboard. The clipboards can be gathered and data recorded permanently at the end of the day.

Small spiral notebook: A small pocketsize notebook can be used to jot down data. During a break or at the end of the day, information can be recorded permanently.

Apron: An apron with pockets can be worn during class. Data can be collected on small pieces of paper stored in the pockets. These can be permanently recorded at the end of the day.

Video: Activities can be videotaped to see if a behavior is occurring or to determine when complete learning trials are being delivered.

Golf or Lap Counters: A counter can be kept in a pocket or on a belt loop. Pressing each time a behavior occurs or a complete learning trial is delivered records ***frequency.***

Anecdotal Notes: Notes can be written to describe how much and what type of assistance children need to complete tasks, as well as number of trials delivered.

How to Evaluate: Tips for Success

'How to Evaluate' focuses on three "big ideas" related to evaluating embedded instruction. Evaluation is designed to answer three primary questions: (a) *Am I doing it?* (b) *Is it working?* and (c) *Do I need to make changes?* Taken together, these questions provide a framework for **data-informed decision making.** Here are some tips for this process:

- Make a data collection plan. If you don't plan for data collection, it will not happen. Be sure to consider who will collect the data, when, where, and how.
- Be creative! Your data collection strategies and plan should be functional for your team, so think about what you need to help you be successful as you collect data on embed learning opportunities throughout the day.
- When analyzing your data consider both what you know and what you might not know from the data you have collected. When available use multiple sources (e.g., quantitative counts, qualitative notes, professional judgement) of data to make instructional decisions.
- Always consider *Am I doing It?* data first. We cannot determine whether embedded instruction is effective if we do not know whether children are being provided with instructional opportunities, as planned.
- Examine your implementation data alongside your activity matrix to determine if you are implementing embedded learning opportunities during planned activities and if you are implementing the number of planned opportunities.
- Select a strategy for collecting data on the child's demonstration of the target behavior that is aligned with the conditions and criterion statement in the priority learning target.
- Consider whether you need to make changes to your implementation of embedded instruction by asking first *Am I doing It? and Is it working?*
- When the child has met the criterion, you might consider modifying the existing priority learning target to work on another aspect of this target skill (e.g., maintenance, generalization, adaptation); selecting an increasingly more difficult, but related skill; or considering if there are other learning priorities for the child related to a different target skill.

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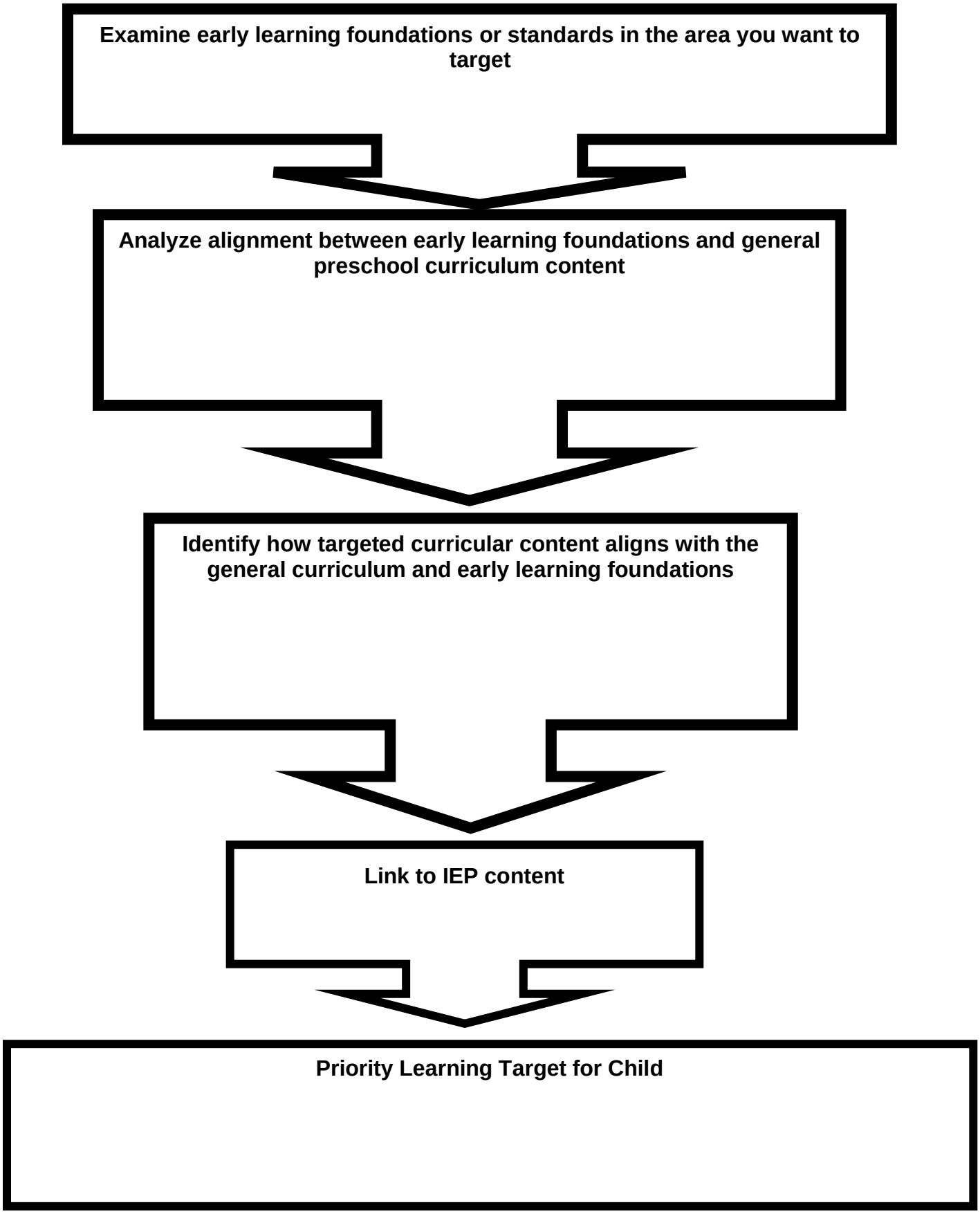
Recommended Website:

National Center for Quality Teaching and Learning—15 minute In-service Suites http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/practice/iss-library.html

Appendix

Linking Curricular Content to Priority Learning Targets



Let's Break it Down for a Child in Your Class

Break down the annual IEP goal or benchmarks into target skills the child could acquire in 2-4 weeks with intentional embedded instruction.

IEP Goal or Benchmark	**Target Skills**
.	1)
	2)
	3)

Embedded Instruction for Early Learning

Activity-Focused Assessment

Teacher ID: _____ Child ID: _____ Date: _____

Activity Analysis			Child-Focused Activity Analysis	
Activity	**Activity Characteristics**	**Activity Expectations**	**Child Strengths**	**Skills/Behaviors To Target for Instruction**

Priority Learning Target Planning Form

Teacher: _____ Child: _____ Date: _____

Behavior	What is the priority target behavior (e.g. Use 2-word phrases to request help)? _____ _____ Provide an example(s) of how the behavior or skill looks and sounds (e.g. Help please?, Help me): _____
Self-Check: Can I see or hear the behavior? Will it be clear to others on the child's team including my teaching assistants and family members what we are targeting?	
Alignment	What learning foundation is aligned to this target? What curriculum objective(s) (e.g., California Preschool Curriculum Framework©) is aligned to this target?
Conditions	How much help will the child need to demonstrate the behavior? What prompts will you provide (e.g. picture card, sign model, verbal model)? What materials or people will be involved (e.g. peer, adults, book, shoe)?
Activities	When or where can you work on this skill (e.g., across daily activities and routines OR centers, recess, snack)? _____
Self-Check: Have I planned to implement the learning trial in a way that I am increasing the target child's participation in the curriculum, daily activities, transitions and routines all children experience?	
Criterion	How will I know when the child is ready for something new (e.g. 2 times per day for 1 week)? _____
Priority Learning Target	Write your **COMPLETE** priority learning target:

Priority Learning Target (PLT) Quality Checklist

Teacher ID: _____Child ID: _____. Date: _____

Instructions: Rate the quality of your four priority learning targets (PLTs) by using the checklist below. Rate one target at a time by reading each indicator and then circle "yes" (if your PLT meets the indicator) or "no" (if your PLT does not meet the indicator) in the box provided. There is space to rate four priority learning targets, one per column.

	Indicator	PLT 1	PLT 2	PLT 3	PLT 4
Behavior	1. Does the priority learning target include a **specific action** the child will do (i.e., behavior)?	YES NO	YES NO	YES NO	YES NO
	2. Can the priority learning target behavior be **counted or measured** (i.e., observable and measurable)?	YES NO	YES NO	YES NO	YES NO
	Self-Check: If you answered "no" to #1 or #2, revise the priority learning target behavior to include a **specific action** you can hear or see the child do and that can be counted.				
	3. Is the priority learning target **appropriate for same-aged peers who do not have disabilities** (i.e., developmentally appropriate)?	YES NO	YES NO	YES NO	YES NO
	4. Is the skill **aligned** with early learning foundations, curriculum objectives, and the child's IEP goals?	YES NO	YES NO	YES NO	YES NO
	5. Is the skill **useful, adaptable, and portable across settings, people, materials, or events** (i.e., generative)?	YES NO	YES NO	YES NO	YES NO
Conditions	6. Does the priority learning target specify **what level of support** the child will need to demonstrate the behavior (i.e., conditions)?	YES NO	YES NO	YES NO	YES NO
Activities	7. Does the priority learning target specify **the activities during which** the skill will be taught (i.e., activities)?	YES NO	YES NO	YES NO	YES NO
Criterion	8. Does the priority learning target **include a statement indicating when or how you will know the child has achieved it** (i.e., how much? how often, or how long?)?	YES NO	YES NO	YES NO	YES NO
Final Self-Check: After answering "yes" to #1 and #2 for each of the four priority learning targets, if you still have any "no's" for a PLT, consider revising that target.					

Activity Planning and Implementation Checklist for Use with Embedded Instruction

	I do this well	I want to do this better
All Activities		
1. I plan for and implement developmentally appropriate activities.		
2. I plan for and implement activities that build on children's interests.		
3. I plan for and implement engaging activities that are meaningful for children.		
4. I plan for and implement activities that include action components for children (what children will do or say).		
5. I use principles of universal design when designing activities.		
6. When necessary, I provide modifications and adaptations to support all children's access to and participation in activities.		
7. I structure activities to encourage peer interactions.		
8. I rotate materials regularly (e.g., at least every month) within and across activities.		
9. I teach children the expectations and sequences of activities.		
10. I plan for and implement a variety of types of activities each day.		
Teacher-Directed Large-Group Activities		
1. I plan for and implement large group activities with respect to children's learning goals.		
2. I vary the structure and activities for large-group activities on a regular basis (e.g., vary based on themes, child).		
3. I provide opportunities for children to be actively involved in large-group activities.		
4. I provide opportunities for peer-to-peer interactions during large-group activities.		

	I do this well	I want to do this better
5. I limit the duration of large-group activities to 15-20 minutes.		
6. I monitor children's engagement and modify the structure or activities when children lose interest in large-group activities.		
7. I use repetition during large-group activities to provide children with multiple learning opportunities.		
8. I design large-group activities so they have logical beginnings, middles, and ends.		
Teacher-Directed Small-Group Activities		
1. I plan for and implement small group activities with respect to children's learning goals.		
2. I vary the structure and activities for small-group activities on a regular basis (e.g., vary based on themes, child interests, learning goals).		
3. I provide opportunities for children to be actively involved in small-group activities.		
4. I provide opportunities for peer-to-peer interaction during small-group activities.		
5. I limit the duration of a small-group activity to 15-20 minutes.		
6. I monitor children's engagement and modify the structure or activity when children lose interest in small-group activities.		
7. I use repetition during small-group activities to provide children with multiple learning opportunities.		
8. I design small-group activities so they have logical beginnings, middles, and ends.		
Child-Initiated Activities		
1. I provide access to a variety of materials during child-initiated activities and ensure materials are readily accessible for all children.		
2. I provide children with repeated opportunities to make choices during child-initiated activities.		
3. I effectively select, arrange, and use materials in child-initiated activities that promote child engagement and learning (e.g., preferred, novel, aligned with themes or projects, culturally relevant).		
4. I follow the child's lead and expand on child interests and preferences during child-initiated activities.		

	I do this well	I want to do this better
5. I encourage peer-to-peer interactions during child-initiated activities through environmental arrangements and use of peer-mediated intervention strategies.		
6. I consider how to adjust child-initiated activities by adapting the materials and their access to promote embedded learning opportunities.		
7. When necessary, I provide individualized modifications and adaptations to support children's access and participation in child-initiated activities.		
Routines		
1. I plan for and implement predictable routines.		
2. When necessary, I provide individualized modifications and adaptations to support children's access and participation in routines.		
3. I plan for how to adjust routines by changing what children do in them (e.g., use snack time to embed instructional opportunities related to communication or social goals).		
4. I plan for and implement routines so they have logical beginnings, middles, and ends.		
5. I teach children the expectations and steps of the routine.		
Transitions		
1. I plan my schedule to minimize the number of transitions children have during the day.		
2. I plan for and implement short transitions (i.e., 5 min or less).		
3. When necessary, I provide individualized modifications and adaptations to support children's access and participation during transitions.		
4. I plan for and implement instruction during transitions for some children.		
5. I plan for and implement transition "warnings" consistently throughout the day.		
6. I teach children the expectations and steps of a transition.		
7. I plan for and implement transitions so that children have something to do while they are waiting for other classmates or teachers.		

Classroom Activity Matrix

Teacher ID: _____ Date:_____

				Total
Total				

Individual Child Activity Matrix

Teacher ID: _____ Child ID :_____ Date:_____

				Total
Total				

Embedded Instruction for Early Learning

Instructional Plan

Child's Name:_____ Date:_____

Antecedent

Instructional context: During which activities will the instruction take place?

_____

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

_____

_____

_____

Behavior

Child demonstrates target behavior

_____

_____

_____

_____

_____

Child does NOT demonstrate the target behavior

What additional help (prompts) do you provide?

_____

_____

_____

Consequence

How do you respond when the child demonstrates the target behavior?

_____

_____

_____

_____

_____

Behavior

Child demonstrates the target behavior

Consequence

How do you respond when the child demonstrates the target behavior?

_____

_____

Behavior

Child does NOT demonstrate the target behavior

Feedback

What feedback do you provide to end the trial?

_____

_____

_____

Evaluation

Type of data:_____

Data Collection Format:_____

It's as Easy as ABC!

Antecedent	Behavior	Consequence

Antecedent	No Behavior	Additional Help	Behavior	Consequence

Antecedent	No Behavior	Additional Help	No Behavior	Feedback

Frequency Data

Name: _____ **Date_____**

What I am looking for: _____

Activity	Count	Total	Comments

Adapted from University of Washington. Center of Human Development and Disability. Experimental Education Unit. (2006). *Show me the DATA!* Seattle, WA: Author.

Accuracy – Measuring level of assistance in one activity with multiple steps

Name: ______________________________

Learning Target:
Criteria:

Date:

Trial	**1**	**2**	**3**	**4**	**5**
Break LT down into smaller steps					
Assistance	I	I	I	I	I
	G/V	G/V	G/V	G/V	G/V
	PP	PP	PP	PP	PP
	FP	FP	FP	FP	FP
	R	R	R	R	R

Date:

Trial	**1**	**2**	**3**	**4**	**5**
Break LT down into smaller steps					
Assistance	I	I	I	I	I
	G/V	G/V	G/V	G/V	G/V
	PP	PP	PP	PP	PP
	FP	FP	FP	FP	FP
	R	R	R	R	R

Date:

Trial	**1**	**2**	**3**	**4**	**5**
Break LT down into smaller steps					
Assistance	I	I	I	I	I
	G/V	G/V	G/V	G/V	G/V
	PP	PP	PP	PP	PP
	FP	FP	FP	FP	FP
	R	R	R	R	R

KEY: I- Independent
G/V- Gestural/Verbal Prompt
PP-Partial Physical Prompt
FP-Full Physical Prompt
R-Resistance/Refusal

For the trials: Break the learning target down into the multiple steps. For example:
Trial 1: Get coat off the hook
Trial 2: Put on coat
Trial 3: Fasten fasteners (snaps, buttons, zipper

Developed at the Experimental Education Unit
University of Washington

Accuracy – Measuring Level of Assistance across Multiple Activities

Name: ____________________ **Date:** ____________

Learning Target:
Criteria:

Date	Activity	Prompts		Date	Activity	Prompts		Date	Activity	Prompts
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R
		I G/V PP FP R				I G/V PP FP R				I G/V PP FP R

Key: **I** = Independent **G/V** = Gestural/ Verbal **PP** = Partial Physical Assistance **FP** = Full Partial Assistance **R** = Refusal

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University of Washington

Duration Data Collection Form

Name: _____ Date:_____

Learning Target:_____

Activity	**Time (in second or minutes)**	**Notes**
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	

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Latency Data Collection Form

Child:
Week of:
Target Behavior:

Criterion:

Days of the Week	# of opportunities presented Time between a teacher direction and initiation of the behavior (in seconds)								**Summary** Total # of correct responses
Monday	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Tuesday	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Wednesday	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Thursday	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Friday	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	

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Behavior Likert Scale for Intensity or Endurance Behaviors

Name: ______________________________ Date:__________________________

Priority Learning Target:____

Activity/ Time of Day	Monday	Tuesday	Wednesday	Thursday	Friday
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Average Score:	**Average ____**	**Average ____**	**Average ____**	**Average ____**	**Average ____**

Key: Complete the key below by qualifying the behavior. 0 would be no occurrence going to 3 being the most severe.

0= __________________ 1=__________________ 2=__________________ 3= __________________

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Event Recording

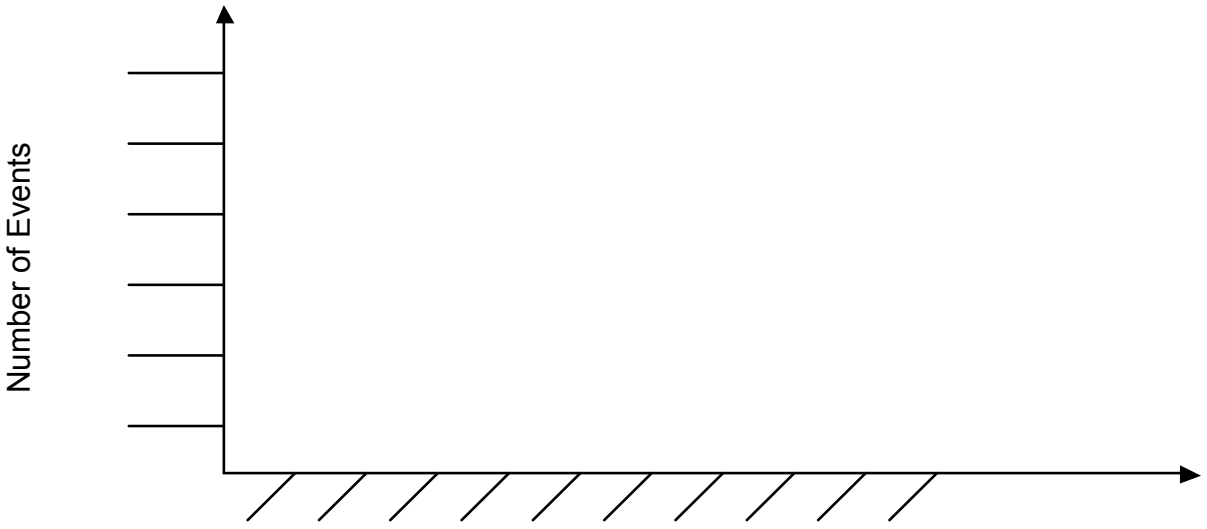
Form 1: Frequency over time

Student: _____ Observer: _____

Behavior: _____

_____

	Date	Time Start	Time Stop	Notations of Occurrences	Totals
1					
2					
3					
4					
5					
Weekly total					
1					
2					
3					
4					
5					
Weekly total					



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Interval Recording

Name_____ **Date** _____

____ Interval

Activity _____

Observer _____

Condition_____

Interval	Behavior _____	Engaged (+/-)	Prompt (+/-)	Interval	Behavior _____	Engaged (+/-)	Prompt (+/-)
1				36			
2				37			
3				38			
4				39			
5				40			
6				41			
7				42			
8				43			
9				44			
10				45			
11				46			
12				47			
13				48			
14				49			
15				50			
16				51			
17				52			
18				53			
19				54			
20				55			
21				56			
22				57			
23				58			
24				59			
25				60			
26				61			
27				62			
28				63			
29				64			
30				65			
31				66			
32				67			
33				68			
34				69			
35				70			

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Weekly Record of Behavior Occurrence

Child:

Learning Target:
Criteria:

	6am	7	8	9	10	11	12pm	1	2	3	4	5	6	7	8	9	night
Mon																	
Tues																	
Wed																	
Thurs																	
Fri																	
Sat																	
Sun																	

Key **Student Initiated:**_____ **Teacher Assisted:**_____ **Other behavior:**_____

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