

# Embedded Intervention

An approach for addressing the goals of children with disabilities in their natural or inclusive environments.

Intervention: strategies and activities early childhood professionals choose when trying to address the developmental needs of a child with disabilities or when trying to improve participation in daily routines

Embedding: helps children with disabilities learn and use new skills in practical and purposeful ways - it is functional and practical because the child is developing skills that supports his membership within the classroom or natural environment

**How to embed intervention: Use Incidental Teaching**

# Incidental Teaching

## Some recent data on Incidental teaching:

The project you're participating in was based on another project funded by the U.S. Department of Education that was designed to determine the effectiveness of class-wide strategies for improving engagement in children with disabilities. The results of that study were as follows:

- \* Baseline data about child engagement and teachers' use of incidental teaching were collected. Then teachers were trained to use incidental teaching. Post-training data were collected.

### Results-Spring 2004:

- \* Incidental teaching was used in an average of 4.3/12 intervals (range 1.7 to 7) during baseline.
- \* All teachers were able to increase their rate of incidental teaching to baseline + 6 (or hit the ceiling - use in 12/12 intervals) during intervention based on prompting.

### Results-Fall 2004:

- \* Incidental teaching was used in an average of 2.5/60 intervals (range .78 to 5.7) during baseline.
- \* Incidental teaching was used in an average of 19.4/60 intervals (range 9 to 24.8) in the last 6 data-based feedback observations.

### Results-Spring 2005:

- \* Incidental teaching was used in an average of 3.8/60 intervals (range .6 to 6.56) during baseline.
- \* Incidental teaching was used in an average of 15.8/60 intervals (range 10.1 to 19) in the last 8 data-based feedback observations.

# Steps for Incidental Teaching

## 1. Arrange the Environment

Provide accessible materials, preferred toys, a defined space, sufficient quantities, and opportunities for peer interaction

## 2. Catch the Child Engaged

In any routine or activity with peers or materials

## 3. Approach the Child

Think about the child's current level of engagement  
Consider the child's learning style

## 4. Elicit Elaboration

More engagement  
Higher engagement  
Skill development

## 5. Provide Reinforcement

Natural reinforcement  
Verbal reinforcement - be specific  
Tangibles

# Incidental Teaching

## Things to Remember!!!!

use in naturally occurring situations

use in any interaction with a child, during any routine of the day

build on what the child is already interested in

can be used to address IEP goals or developmental goals

use frequently

can be used with all kids in the classroom—not just those with disabilities

The more a child interacts with his or her environment (engagement), the greater the chance he or she will learn. Teaching opportunities arise from the child's lead, ensuring that teaching occurs in activities that are preferred and functional.

# Incidental Teaching



Using the child's interests to elicit higher levels of engagement by increasing or prolonging engagement, or involving the child in a more sophisticated activity.

## Encourage the child to continue engaging for a longer amount of time.

This provides the child with more opportunities for working on skills, interacting with others, mastering a task, and increasing the complexity of his or her play.

Example: Encourage the child to draw another picture after she has completed her art project.

How would you engage a child for a longer amount of time????

## Encourage the use of more sophisticated behavior.

This provides the child with more opportunities to use sophisticated and complex behavior by moving from the current level of engagement to a higher level.

Example: Encourage the child to draw pictures about what she did over the weekend, and explain the picture to you when she is done.

What are ways to encourage sophisticated behavior????

## Encourage skill development.

This provides the child with more opportunities to work on a developmental goal. It is easier to work on goals when they are functional.

Example: For a child who struggles with peer interaction, encourage her to draw a picture with a friend on a large sheet of paper.

What are some ways you can use incidental teaching to work on developmental or IEP goals????



# Zone Defense Scheduling

What is ZDS?  
organizing the staff and environment of a preschool classroom - organizing the roles of adults in the classroom during routines and during transitions between routines



Goal: to reduce the amount of time children spend nonengaged by eliminating needless waiting during transitions and encouraging sophisticated play during activities

## Benefits of ZDS

- unplanned situations can be easily handled - adults have specifically defined roles and can easily attend to telephone calls, child needs such as potty, or other situations as they arise without disturbing the engagement of all of the children
- nonengagement is limited during activities - one adult is always focused on the children and the activity at hand, thus higher levels of engagement can be encouraged
- nonengagement is limited during transitions - adults stationed at old and new centers prevent waiting, keep children engaged, and allow children to transition at their own pace, without having to wait for their peers
  - adults share equal responsibility and have variety - both adults share responsibility allowing empowerment and alternating responsibilities ensures that no adult is always given undesirable tasks
- routines are more orderly and effective - allows for more time to prepare for the next activity



# Zone Defense Scheduling

## ZDS in 3 easy steps!!!

### STEP 1: ROOM ARRANGEMENT

- **Eliminate too much open space**
  - divide up the room so that children are unable to run laps in the room
  - create defined centers and spaces with definite barriers
- **Provide lots of materials and access to those materials**
  - it is good to have more than one of some toys to encourage parallel play
  - toys should be at or a little above the developmental level of the children in the classroom
  - it is okay to have some materials out of reach to encourage communication skills
  - rotate materials throughout the year so children have access to new and interesting materials
- **Distinguish clear zones in the room**
  - use furniture or shelving units to distinguish zones
  - place furniture in the middle of the room to help break up the room
  - name each area and provide a sign or poster to label each area
  - some examples of areas are a book center with books and some cozy furniture or pillows to read on; a space with lots of different blocks and other things for building; or a dramatic play area with dress up clothes, kitchen items, etc.



# Zone Defense Scheduling

## ZDS in 3 easy steps!!!

### STEP 2: DIVIDE UP THE DAY

- **Divide the day into short 15-20 minute blocks of time**
  - short blocks of time mean children will be less likely to lose interest in the activity and become nonengaged
  - do not schedule a block of time for diaper changes - this can be completed throughout the day by the adult in the set-up role
  - make sure the schedule includes child activities as well as teacher break times
- **Be aware of potential transition problems**
  - a quiet activity immediately after an active activity increases transition time because children are not able to decrease their activity level that quickly
  - less active routines should be scheduled before quiet routines to ensure easier transitions





# Zone Defense Scheduling

## ZDS in 3 easy steps!!!

### STEP 3: ASSIGN ROLES

- **Set-up role**
  - responsible for changing diapers, attending to disruptive children, greeting guests that come into the classroom, setting up the upcoming activity, and handling unplanned situations
  - basically, everything that occurs in the classroom during the day that is unrelated to the children's activity and engagement is this person's responsibility
  - adult should set-up for the activity that he or she will lead next
- **Activity/Task role**
  - responsible for whatever activity is planned during the block of time that they are in this role - circle time, centers, free play
  - encourages engagement, facilitates more sophisticated play, and remains at the activity until all children have transitioned
- **Alternate roles**
  - for each block of time, one person should be assigned to either the set-up role or the activity/task role
  - alternate roles for each block of time so that no one is stuck in the set-up role all day long
  - assign adults to be *Person A* or *Person B* for the day - follow the roles assigned for each block of the day
  - also change the daily roles (*Person A and B*) weekly so that all adults in the room are responsible for all of the tasks at some point



# Zone Defense Scheduling

## Helpful Hints

For longer amounts of time, such as 30 minutes of rotating through centers -

- \* one person can remain in the set-up role the whole time and once those duties are finished can join the ongoing activity

- \* or, roles can be switched half way through so each teacher can be in charge of an activity

For staff members who are unable to plan activities, the best solution is to have other staff model and train them - this can be done during naptime or other planning periods. Train them, then do the planning with them, let them plan on their own and look over their plans, then they will be ready to plan on their own.

Sometimes multiple unplanned situations occur and it is necessary for both teachers to attend to something other than the children and the scheduled activity - do not worry. The ZDS is designed to be a flexible schedule to help designate who should respond first to unplanned situations and it helps to eliminate times during the day when no adults are available to focus on child engagement.

There are two options when scheduling staff in a classroom when a child needs one-on-one attention throughout the day (it is assumed that in this situation there are at least 3 adults in the classroom)

- \* One adult is assigned to assist that child all day and would not participate in the alternating of the set-up and activity/task roles
- \* Adults can be scheduled as usual. Two adults are assigned to the scheduled activity/task - one is responsible for the entire group while the other is responsible for the child needing one-on-one assistance. This is the preferred method.

The ZDS can also be used when there are more than 2 teachers in the classroom - one adult will still be in the set-up role during each block of time, but 2 adults will be in the activity/task role - the set-up role rotates between all 3 adults.



# Zone Defense Scheduling

An example of a 2-person ZDS

Time	Person A	Person B
8:00 – 8:15	Arrival	Set Up
8:15 – 8:30	Set Up	Story
8:30 – 8:45	Free Play	Set Up
8:45 – 9:00	Set Up	Circle
9:00 – 9:15	Table Toys	Set Up
9:15 – 9:30	Set Up	Centers
9:30 – 9:45	Set Up	Centers
9:45 – 10:00	Snack	Set Up
10:00 – 10:15	Set Up	Outside
10:15 – 10:30	Set Up	Outside
10:30 – 10:45	Set Up	Outside
10:45 – 11:00	Music	Set Up
11:00 – 11:15	Set Up	Art
11:15 – 11:30	Free Play	Set Up
11:30 – 11:45	Set Up	Lunch
11:45 – 12:00	Set Up	Lunch
12:00 – 12:15	Nap	Set Up
12:15 – 12:30	Nap	Set Up
12:30 – 12:45	Teacher Break	Nap
12:45 – 1:00	Teacher Break	Nap
1:00 – 1:15	Nap	Teacher Break
1:15 – 1:30	Nap	Teacher Break
1:30 – 1:45	Nap	Set Up
1:45 – 2:00	Nap	Set Up
2:00 – 2:15	Nap	Set Up
2:15 – 2:30	Set Up	Snack
2:30 – 2:45	Centers	Set Up
2:45 – 3:00	Centers	Set Up



# Zone Defense Scheduling

## A few more examples

### 3-person ZDS

Time	Person A	Person B	Person C
8:00 – 8:15	Arrival	Set Up	Arrival
8:15 – 8:30	Story	Story	Set Up
8:30 – 8:45	Set Up	Free Play	Free Play
8:45 – 9:00	Circle	Set Up	Circle
9:00 – 9:15	Table Toys	Table Toys	Set Up
9:15 – 9:30	Set Up	Centers	Centers
9:30 – 9:45	Set Up	Centers	Centers
9:45 – 10:00	Snack	Set Up	Snack
10:00 – 10:15	Outside	Outside	Set Up
10:15 – 10:30	Outside	Outside	Set Up
10:30 – 10:45	Outside	Outside	Set Up
10:45 – 11:00	Set Up	Music	Music
11:00 – 11:15	Art	Set Up	Art
11:15 – 11:30	Free Play	Free Play	Set Up
11:30 – 11:45	Set Up	Lunch	Lunch
11:45 – 12:00	Set Up	Lunch	Lunch
12:00 – 12:15	Nap	Set Up	Nap
12:15 – 12:30	Nap	Set Up	Nap
12:30 – 12:45	Teacher Break	Nap	Set Up
12:45 – 1:00	Teacher Break	Nap	Set Up
1:00 – 1:15	Set Up	Teacher Break	Nap
1:15 – 1:30	Set Up	Teacher Break	Nap
1:30 – 1:45	Nap	Set Up	Teacher Break
1:45 – 2:00	Nap	Set Up	Teacher Break
2:00 – 2:15	Nap	Nap	Set Up
2:15 – 2:30	Set Up	Snack	Snack
2:30 – 2:45	Centers	Set Up	Centers
2:45 – 3:00	Centers	Set Up	Centers



# Zone Defense Scheduling

## A few more examples

Assigning an adult to a specific child

<i>Time</i>	<i>Person A</i>	<i>Person B</i>	<i>Person C</i>
8:00 – 8:15	Set Up	Arrival	Assist Henry
8:15 – 8:30	Story	Set Up	Henry
8:30 – 8:45	Set Up	Art	Henry
8:45 – 9:00	Centers	Set Up	Henry
9:00 – 9:15	Centers	Set Up	Henry
9:15 – 9:30	Set Up	Table Toys	Henry
9:30 – 9:45	Circle	Set Up	Henry
9:45 – 10:00	Set Up	Snack	Henry
10:00 – 10:15	Outside	Set Up	Henry
10:15 – 10:30	Outside	Set Up	Henry

Alternating assignments to assist a specific child

<i>Time</i>	<i>Person A</i>	<i>Person B</i>	<i>Person C</i>
8:00 – 8:15	Set Up	Arrival (lead)	Arrival (Henry)
8:15 – 8:30	Story (lead)	Set Up	Story (Henry)
8:30 – 8:45	Art (Henry)	Art (lead)	Set Up
8:45 – 9:00	Set Up	Centers (Henry)	Centers (lead)
9:00 – 9:15	Set Up	Centers (Henry)	Centers (lead)
9:15 – 9:30	Table Toys (lead)	Set Up	Table Toys (Henry)
9:30 – 9:45	Circle (Henry)	Circle (lead)	Set Up
9:45 – 10:00	Set Up	Snack (Henry)	Snack (lead)
10:00 – 10:15	Outside (lead)	Set Up	Outside (Henry)
10:15 – 10:30	Outside (lead)	Set Up	Outside (Henry)



# Zone Defense Scheduling

## ZDS Template

Time	Person A	Person B	Person C
8:00 - 8:15			
8:15 - 8:30			
8:30 - 8:45			
8:45 - 9:00			
9:00 - 9:15			
9:15 - 9:30			
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1:00 - 1:15			
1:15 - 1:30			
1:30 - 1:45			
1:45 - 2:00			
2:00 - 2:15			
2:15 - 2:30			
2:30 - 2:45			
2:45 - 3:00			

# Engagement

The amount of time a child spends involved with the environment (teachers, peers, or materials) in a way that is appropriate for his or her age, abilities, and surroundings.

## LEVELS OF ENGAGEMENT (McWilliam and deKruif, 1998)

Sophisticated  
Engagement



**Persistent Behavior:** Problem solving due to a challenge in the environment. Using a strategy to reach the goal. (e.g., when child is not understood he uses different words to get the message across)

**Symbolic Behavior:** Using language, pretend play, sign language, drawings, etc. to communicate about something or someone not physically present. Also includes talking in character, substituting objects for other objects in play, or acting out a scenario. (e.g., child puts a peg to a doll's mouth to "feed" the baby)

**Encoded Behavior:** Using understandable language or sign language to communicate about objects or events that are within the immediate environment. (e.g., asking for help, imitating new words)

**Constructive Play:** Manipulating objects to create, make, or build something. Intentionally putting objects together. (e.g., doing puzzles, building something with blocks, copying letters)

Average  
Engagement



**Differentiated Behavior:** Child is actively involved with the environment, but behavior is not sophisticated (does not fit into any of the higher categories) or repetitive (does not fit into any of the lower categories). (e.g., using gestures, playing with toys, using a spoon to eat)

**Focused Attention:** Intently watching or listening to features in the environment for at least three seconds. Is more selective and intense than casual attention. (e.g., paying attention to the teacher who is reading a book, watching another child build something)

Unsophisticated  
Engagement



**Undifferentiated Behavior:** Interacting with the environment in a repetitive manner, using simple behaviors. (e.g., banging a block on the table; using repetitive vocalizations, such as "Ba-ba-ba-ba")

**Casual Attention:** Watching a range of things in the environment. Is more relaxed and wide-ranging than focused attention. (e.g., looking around the room to see where to go next)

**Nonengaged Behavior:** Child is unoccupied. Includes needless waiting (i.e., not in a turn-taking situation), staring blankly, wandering aimlessly, crying, and aggressive or destructive acts. (e.g., sitting alone doing nothing, wandering around the classroom without a destination)

# Engagement

The amount of time that children spend involved with the environment (adults, peers, or materials) in a way that is appropriate given their age, abilities, and surroundings (McWilliam and Bailey, 1995).

Includes:

- Participation
- Interaction
- Playing
- Being active
- On-task behavior
- Involvement

Compared to peers without disabilities, children with disabilities spend:

- More time passively nonengaged
- Less time interactively engaged with adults
- Less time attentionally engaged with peers
- Less time in mastery-level engagement with materials (McWilliam and Bailey, 1995)

Engagement is important because it leads to positive changes in children's behavior, interactions with others, and thinking and reasoning skills. It is also a precursor to learning.



## References

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