

**Module: Communication and Emergent Literacy:
Early Intervention Issues**

Session 3: Communication and Language Interventions

Handout I: Suggestions for Caregivers of Children With Echolalia

Field, E.I. (2005). *Suggestions for caregivers of children with echolalia*. Chapel Hill, NC: Early Intervention Training Center for Infants and Toddlers With Visual Impairments, FPG Child Development Institute, UNC-CH.

Used with permission of Elizabeth Ives Field, CCC-SLP, Bangor, ME.

Introduction

These ideas, based on my therapy and consultation work with children who are autistic or visually impaired, are designed for use with youngsters who tend to express many of their thoughts through repetition of the phrases and sentences they have heard other people use. These repetitions, or echoes, may occur immediately after children hear them or at a later time, often when a similar situation occurs or when children again hear other words they heard at the time they first heard the echoed utterance.

Examples:

(a) Mom: "Do you want a cookie?"

Child: (reaching for it) "Do you want a cookie?" Or, "You want a cookie?"—an immediate echo.

Child: (later, wanting another cookie when Mom hasn't offered one) "Do you want a cookie?"—a delayed echo.

Or

(b) Dad: "Turn the TV on. I want to see the news."

Sister: (later that evening) "Mom, I want to watch TV."

Child: "I want to see the news."—a delayed echo.

The echoes may be exact word-for-word replays or they may be "mitigated," or changed somewhat. The examples above were exact repetitions. Here are some mitigated ones:

(c) Mom: "Do you want to play blocks or slide?"

Child: (moving toward the slide) "Or slide."

Or

- (d) Teacher: "Do you need to go to the bathroom?"
Child: "You need to go to the bathroom."

The echoes in (c) and (d) are more nearly appropriate, largely because the child has responded with a statement inflection rather than repeat a question. Often, the echoes serve a communicative purpose such as making a request, as in example (a) above, or answering a question, as in examples (c) and (d). Other echoes, as in (b) in the examples, have little functional value and are based on strong memory and associations between words and situations.

Imitation, of course, is a normal part of learning to talk, but it generally occurs in young children who are using one or two words at a time, and it involves a simplification of language structure without the confusion between questions and answers, between *I* and *you*, or between *yes* and *no* that are often seen in echolalic language. Children who depend heavily on echolalia to communicate often have excellent memory for what they hear, but unfortunately the ability to repeat long sentences, or storybook and movie lines, does not guarantee understanding of them or indicate ability to communicate in a normal conversational manner.

The suggestions in this paper are designed for early work with children with echolalia, who often have difficulty requesting or rejecting objects, making choices, directing or prohibiting another person's actions, returning greetings, and answering questions. Often, their play consists of repetitive actions such as spinning things, flapping hands and objects, lining toys up, banging two objects together, or opening and closing doors. Many of these children have not learned to play meaningfully with preschool toys and have not developed imaginative, "pretend" play. They often have behavioral issues such as difficulty transitioning from one activity to another; resistance to new, unfamiliar events; eating and sleeping problems; or emotional meltdowns when confused or frustrated.

To avoid excessive use of "he or she" in the writing, the ideas below are written as if for a hypothetical child named David.

- 1. When playing with David or helping him with dressing, eating, bathing, and other one-to-one activities, avoid giving verbal instructions that will sound strange if echoed.** Instead, comment on the activity *using words that would also be appropriate coming from David* and give physical assistance if necessary. For example, when helping him put nesting cups together, you could say something like:

“Cup goes in . . . another cup. . . . Uh-oh, too big. . . . Let’s try this cup. . . . There, it’s in!”

During bathing, you might say: “Here’s the washcloth. . . . Need some soap. . . . Gotta wash arms. . . . Washing one arm. . . . All done. . . . Washing the other arm.”

It’s important to *say these things as he’s experiencing them so the words and meaning match*. “Here’s the washcloth” should be said as you help him pick it up—not when you see it but he’s feeling the running water or picking up a toy boat. Use phrases and short sentences so that he has less information to process and the words more clearly express what’s happening. Example: “Books go on the shelf” instead of “Can you help me put the books on the shelf?” Even if he understands the longer sentence, it’s less appropriate if he repeats it and is a harder sentence form for him to reuse with other words.

It is very important that your modeled sentences are only a word or two longer than what he says spontaneously and appropriately. If he echoes five-word sentences but creates new ideas in only one or two words, you should model two- to three-word phrases. They may need to be short and simple but should not be “baby talk,” and you don’t need to omit words like “a” and “the.”

2. As much as possible, avoid questions and direct commands at first and replace them with statements that David can imitate and reuse in similar situations.

Examples:

“Time to go to the bathroom,” “Gotta go potty,” or “David needs to pee” can initiate a bathroom trip instead of “Do you have to go to the bathroom?” If you’re mistaken, and he resists or doesn’t perform, you can say “No potty now” or “Don’t need to go” and try again later. In both cases you’ve modeled phrases or sentences that are appropriate for him to use spontaneously to tell you he needs, or doesn’t need, to use the bathroom.

If he’s obviously enjoying something, you can say “David likes to hear music” or “Mmm, that’s a good cookie” instead of asking “Do you like it?” which he probably can’t answer yet.

3. Try to omit pronouns, especially *I* and *you* and *my* and *your*, which are very difficult for children with echolalia because their base of reference shifts with each speaker. For now, use names: “Mama’s cooking supper”; “Dad will tie David’s shoe”; “David’s playing the piano.” *I* can be reintroduced later, followed by *you*, but much confusion can be avoided if they’re eliminated for a while. Also, if you refer to David

as *he* too often, as in “He wants to go outside,” you may find him calling himself *he* inappropriately.

- 4. Some basic communication skills to work on include David’s being able to comment appropriately on what he’s doing (discussed in suggestions #1 and #2), make requests, make choices, reject objects and activities, and direct or prohibit other people’s actions.**

Requesting objects

If David reaches for a toy truck, say, “David wants the truck” or “Want that truck!” and give it to him.

If he says, “Do you want a cookie?” say, “David wants a cookie” as you give it to him.

If he makes requests frequently and comfortably, either with “David wants _____” or with “Do you want _____?” this might be one good place to use *I*. Take his hand and pat his chest with it as you model “*I* want a cookie.” Children often learn “*I* want” before using *I* with other verbs, but he’ll soon learn that when his hand touches his chest he needs to say “*I*.” It’s still important to use *David* some of the time; eventually he will know that *David* and *I* mean the same thing when he’s the speaker. When referring to himself, *David* is a less mature form than *I*, but *you* is just plain inaccurate.

Making choices

For the child who cannot respond to a verbal choice such as “Do you want an apple or a cracker?” omit the question for a while. Just offer the two items saying, “Cracker . . . apple . . . David wants _____,” leaving a blank for him to fill in. It should sound like a statement, not a question. If he names one and takes it, say, “David wants the apple” or “Want some apple!” to confirm his choice as you give it to him. If he says nothing and just takes one, say “Apple!” and pause before releasing it. There’s a good chance he’ll echo it, but if not, just name it one more time and give it to him. Avoid saying, “You want an apple” or “Okay, here’s your apple” because he may use your words to initiate a spontaneous request later. When he’s reliably using a fill-in-the-blank format, you can gradually build up to the natural question form.

Rejecting objects or activities

If he pushes away his spinach or resists when his face is being washed, help him push it away or back off and say “No spinach!” or “Don’t want spinach!” or “No washing face!” modeling what he could say to protest. Sometimes you can accept his refusal, but in other cases you’ll need to overrule him by saying something like “David doesn’t like face washing”—pause, pat his shoulder or make some other empathic response, then go on—“David’s face is dirty. . . . Mommy has to wash it.”

Directing others' actions

If he hands you objects to fix or open, holds out his coat to be zipped or his shoe to be tied, you can say, "Daddy, help please" or "Mama, zip it" *as if directing yourself*. Don't say it with a questioning intonation as in "Mama open it?" or that's probably the way he'll say it too. And be careful about too frequently responding "Okay" or "Mama will do it." Either do what he has asked without comment or say something different each time, so he won't think he's supposed to repeat the whole thing, as in "Mama zip it okay."

If he doesn't request action from you, you'll need to physically prompt him. You, or a silent third person, could help him hold out the ends of his jacket or a box he can't open and then say "Please zip" or "Mom, open it."

Prohibiting others' actions

If someone takes his toy, help him grab it back and say "Give it back!" or "Don't take it!" Tickle him and then tell yourself "No tickling" or "Stop" or "Don't" and then immediately stop. Model "stop" and "go" during action games like swinging, spinning, or riding a toy. As you can see, this overlaps with rejecting activities and directing actions. The ability to request, protest, and direct people verbally can be a big help in avoiding tantrums.

5. Another common area of difficulty for children with echolalia is greetings. If he tends to repeat "Hi David" when you greet him, try these ideas:

- a. Just say "Hi" or "Bye" without adding his name.
- b. If you need to get his attention, say "David," and then, after he attends to you, "Bye." You can repeat the "bye" and help him wave if necessary, to get a response. For "Hi," he may be more likely to respond if you bridge the gap between you by putting his hand on your face or shoulder to direct his attention.
- c. Encourage people you see regularly to greet him as described above and be sure you model appropriate responses, as in the example below:

Mrs. Smith: "Bye" or "See you later" or "See you next Wednesday" (not "Come again soon, honey" or other farewell that's inappropriate if repeated by the person who's leaving).

You: "Bye, Mrs. Smith" (helping David wave).

David: (echoing) "Bye, Mrs. Smith."

6. Children with echolalia tend to repeat praise.

Try to avoid statements like "Good for you!" and "You did it!" Instead, try to praise him by making an enthusiastic comment on the accomplishment. Words like "There, it's done!" "Hurray!" "Yeah!" "Good, all done!" or "David did it!" are more appropriate

if he repeats them. Give him a hug or pat on the back if he enjoys these, or use a small bit of food or other treat to reinforce his accomplishment if needed.

7. A fill-in-the-blank technique is often helpful when you're trying to avoid questions and still get some information.

Teacher: "David went to the playground for recess. David played on the _____."

David: "Swings."

Just don't overdo it or you may find him stopping his sentences in the middle and expecting you to finish them.

8. I've found the carrier phrases "Time to _____" and "Let's _____" to be good substitutes for some questions and instructions. If the child remembers and repeats them later, they are still appropriate.

Examples:

"Time to get in line" instead of "You get in line now."

"Let's play with the blocks" instead of "Do you want to play with the blocks?"

9. If he repeats songs, stories, or lines from videos when he's playing alone, ignore him or try to interest him in some activity. If he does it while you're interacting with him, try to redirect him to the activity at hand. If he persists, say something like "David heard that on TV" and change the subject. Try to avoid running the TV or radio when nobody's really listening, since it's a source of much meaningless language to David and may limit his attention to more appropriate activities.

10. Some exceptions to the / and question rules:

It's okay to use / to refer to shared activities when it's appropriate for him to echo it.

Examples:

a. Both of you are clapping.

You: "I'm clapping."

David: "I'm clapping."

b. He stops to listen to a plane flying overhead.

You: "I hear a plane."

David "I hear a plane."

Likewise, you can use a question when your objective is for him to understand and repeat it. For instance, when helping him search for a toy you might say, "Where's the truck? . . . Can't find the truck. . . Here it is!" In this case, the question is something you would want him to say in a similar situation.

11. Asking a child with echolalia to repeat a sentence by telling him “Say _____” often isn’t successful because he’s likely to repeat the “say” along with the words you want him repeat. I’ve found this more useful after a base of appropriate communicative language is established and the child is better able to understand what you want him to do. At that point you may want to tell him exactly what to say, as in “Tell Daddy, ‘Time for lunch!’” instead of the more confusing “Tell Daddy to come to lunch.”

12. Helping David learn to play with toys in a meaningful way is very important.

Children learn many concepts about actions, locations, disappearance and reappearance, cause and effect, and other relationships between objects and events through their play. Learning to make appropriate comments about his own activities will help him to connect actions, objects, and events with the words that represent them. Here’s a sample activity for working on language and play together:

Help David turn the handle on a jack-in-the-box. If possible, guide him at the elbow so he’s doing the holding and turning of the handle. Say something like this: “Here’s the jack-in-the-box [as you put his hands on it]. . . . Gotta turn the handle [as you help him do so]. . . . Music, it makes music. . . . Oh! Jack popped up! . . . Time to push him down. . . . Shut the door. . . . Jack’s gone down. Jack’s in the box. . . . Turning the handle. . . . More music.” Be sure to time your words to match his experience.

Some important things to remember in language modeling during play are to

- say things that match what’s happening *from the child’s point of view*.
- avoid questions and instructions.
- say things that will be accurate if echoed.
- describe events as they happen.
- use short phrases, even if he’s echoing whole sentences.
- don’t say exactly the same thing every time. Vary from “Oh, Jack popped up” to “Jack came up” to “Here’s Jack” and so on.
- avoid excessive talk. Pause and allow him time to process what you’ve said and to say something himself.

Most of the children with echolalia I’ve known have been actively trying to use language to communicate despite their confusion about communicative functions, conversational roles, and the meanings of concepts, which vary as speakers or situations change. The purpose of these suggestions is to help children use their echolalia to establish a basis of meaningful communication from which more complex self-generated language will develop.

Module: Developmentally Appropriate Orientation and Mobility

Session 3: Cognitive Development

Handout B: Concepts Learned in the Early Years: Birth to 24 Months

Anthony, T.L. (2002). Concepts learned in the early years: Birth to 24 months. In R.L. Pogrund & D.L. Fazzi (Eds.), *Early focus: Working with young children who are blind or visually impaired and their families* (2nd ed., pp. 341-343). New York: AFB Press. Used with permission of AFB Press, American Foundation for the Blind. All rights reserved.

The following list provides a general overview of key items that may be tied to early O&M concept development. It is not intended to be exhaustive of all of the concepts that are learned during the first two years of life.

Items were drawn from the following early childhood assessment tools: *Carolina Curriculum for Infants and Toddlers* (Johnson-Martin, Jens, Attermeier, & Hacker, 1991) and the *Hawaii Early Learning Profile: Birth to Three* (HELP; Parks, Furono, O'Reilly, Inatsuka, Hosaka, & Zeisloft-Falbey, 1994). Neither of these tools has normative data for children with visual impairments. Therefore, age ranges have not been noted, and in some cases the items may not be appropriate for a child who is totally blind.

Object permanence

- Shows interest in people and toys
- Reacts to disappearance of objects
- Finds partially covered objects
- Seeks out family members and pets when named
- Plays peek-a-boo
- Finds totally hidden objects
- Unwraps toys
- Remembers locations of toys that are put down for a few minutes
- Remembers familiar places where objects are kept
- Reaches for objects that are out of sight after they no longer make noise
- Brings objects from another room upon request
- Reaches in correct direction of objects that have made noise in several places
- Remembers where objects belong and puts them away upon request

Cause and effect / means-end

- Watches hands
- Uses hands and mouth for sensory exploration of objects
- Shakes rattles or bangs toys placed in hand
- Slides toys on surfaces
- Overcomes obstacles to retrieve objects
- Guides action on manual toys (pushes buttons, pulls levers, etc.)
- Drops objects systematically
- Understands that different toys are activated by different actions
- Retrieves objects using other items
- Solves simple problems with tools
- Demonstrates common use of objects

Imitation

- Enjoys repeating newly learned activities
- Imitates new gestures
- Engages in simple imitative play
- Imitates adult behavior using props
- Provides “help” by imitating adults in simple household chores

Body image

- Moves hands to mouth
- Watches hands
- Brings hands together at midline
- Plays with own hands, feet, fingers, and toes
- Touches spots on body where a toy or object is touching
- Brings feet to mouth
- Transfers objects from one hand to the other
- Identifies self in mirror
- Names one, then three, then six body parts

Spatial relationships

- Inspects surroundings
- Visually searches for sounds
- Shifts visual attention or body orientation from one object to another
- Plays with own hands, feet, fingers, and toes
- Turns in a direction when name is called
- Brings feet to mouth
- Glances at one toy, then at the other when a toy is placed in each hand
- Reaches for nearby objects in view
- Works for object that are out of reach, but still in sight
- Drops objects systematically

- Searches for objects moved out of visual field
- Removes rings from the stick of a ring-stack toy
- Stacks rings on pole (may not be in correct order)
- Nests two or three cans
- Places pegs in pegboard holes
- Places round piece, then square piece, and then triangle piece in form board
- Points to distant outdoor objects
- Explores cabinets and drawers

Self-initiation

- Enjoys repeating a newly learned game
- Waits for an adult or sibling to take his or her turn in a turn-taking game
- Continues a familiar game by initiating movements involved in the game
- Repeats actions that elicit laughter from others
- Moves away from caregiver who is in the same room
- Makes simple choices about books, food, etc.
- Gets own toys to play with from a familiar place
- Uses adults to solve problems
- Approaches peers or adults to initiate play
- Solves simple problems without adult assistance
- Explores new environments

References

- Johnson-Martin, N.M., Jens, K.G., Attermeier, S.M., & Hacker, B.J. (1991). *The Carolina curriculum for infants and toddlers with special needs* (2nd ed.). Baltimore: Paul H. Brookes.
- Parks, S., Furono, S., O'Reilly, T., Inatsuka, C.M., Hosaka, C.M., & Zeisloft-Falbey, B. (1994). *Hawaii early learning profile (HELP): Birth to three*. Palo Alto, CA: VORT Corporation.

Module: Developmentally Appropriate Orientation and Mobility

Session 3: Cognitive Development

Handout E: Natural Learning Opportunities for Infants and Toddlers That Build Environmental Concepts

Lowry, S.S. (2004). *Natural learning opportunities for infants and toddlers that build environmental concepts*. Chapel Hill, NC: Early Intervention Training Center for Infants and Toddlers With Visual Impairments, FPG Child Development Institute, UNC-CH.

Daily routines offer endless natural learning opportunities for movement and repetition. The table below describes learning opportunities for children birth to 3 years that promote environmental concept development within daily routines. When implementing these activities within naturally occurring learning opportunities, consider the following five recommendations:

1. Task-analyze daily events and divide them into small actions that can easily be accomplished by the child and the assisting adult, gradually increasing complexity and involvement over time.
2. Repeat experiences often, adding new activities gradually and one at a time.
3. Keep furniture, favorite toys, and personal items in predictable positions, especially after the child begins to move independently.
4. Provide simple mediation and interpretation with subtle vocal or physical cues, while providing sufficient time for the child to process and respond.
5. Introduce spatial terms such as in, out, on top, under, beside, up, and down and descriptive terms such as rough, smooth, hard, soft, hot, cold, loud, and quiet.

Age	Indoors	Outdoors
Early infancy	<ul style="list-style-type: none"> • Include the infant once or twice daily in routine chores; use a front carrier or bouncy seat to keep the infant close to action. • Provide simple words for events and sounds. If the infant is attentive, introduce objects and encourage brief touching. • Watch for overstimulation; if the activity seems aversive, repeat it later. 	<ul style="list-style-type: none"> • As tolerated, take the infant outdoors for brief periods. • Provide appropriate sun and light protection. • Give simple words for events and sounds. • Take the infant on brief outings to the supermarket, church, department store, etc. • Watch for overstimulation; if the activity seems aversive, repeat it later.

Age	Indoors	Outdoors
Late infancy	<ul style="list-style-type: none"> • Once or twice daily, bring the infant along during chores, using appropriate seating such as a highchair positioned nearby. • During each task, offer an associated object for the child to hold and look at—e.g., give a spoon and cup while loading the dishwasher, or wet and dry socks while doing the laundry. • Pick the child up and allow the him or her to feel your hand while you turn on the washing machine or microwave. 	<ul style="list-style-type: none"> • Take the child outdoors daily. • Provide appropriate sun and light protection. • Place the infant on a blanket in the grass to experience its texture indirectly. • Carry the infant around the yard or playground and offer natural items to touch, look at, and listen to. • As infants display interest, expose them to grass, trees, shrubs, deck railings, leaves, flowers, sidewalks, driveways, brick steps, and pets. • Take frequent and longer trips out into the community. Offer grocery items and products to touch, smell, look at, and hear.
Second year	<ul style="list-style-type: none"> • Continue involving the child in daily tasks and increase the child's participation. • Select three or four daily events and routinely have the child help, such as holding a glass under the water dispenser; stirring oatmeal, placing it in the microwave, closing the door, and pushing buttons; or helping to retrieve a juice cup from a predictable place in the refrigerator. • Keep task involvement brief, according to the interest of the child. Gradually add new tasks one at a time. 	<ul style="list-style-type: none"> • Continue daily outdoor excursions. • Increase the child's direct exposure to natural objects in the yard, neighborhood, and park. • Draw attention to distant sounds such as traffic, sirens, and dogs barking. • Encourage beginning play with simple outdoor play equipment. • Continue trips out into the community. Increase exploration of objects and use simple, descriptive terms. Hold the child close to the action at the cash register—describe what is happening and explain sounds.

Age	Indoors	Outdoors
Third year	<ul style="list-style-type: none"> • Involve the child with several daily tasks, expanding to a new one each week. • As the child tolerates, involve in whole sequences of simple tasks—e.g., open the cabinet, reach for a cup, turn on the faucet, hold the cup under, and drink. • Begin having the child find and put away personal items with verbal encouragement, such as shoes from the closet, pajamas laid over the edge of an open drawer, or the toothbrush in a cup on the counter. • Keep personal items and favorite toys in predictable locations to enable more independent involvement. 	<ul style="list-style-type: none"> • Provide daily play and exploration outdoors, including exposure to natural objects and surfaces. • Point out a variety of objects, surfaces, sounds, and weather. • Encourage the use of toddler play equipment through patient demonstration. Arrange the equipment in permanent positions, each piece only 3 to 4 feet from another, to enable the child to walk independently from one to the next. • Continue community trips, including exploration of departments and products.

Readings and Assignment Choices following Session II

Reading

Complete the following reading prior to session III in April. It will prepare you for that content.

1. Chapter 4: Early Literacy Experiences, pages 152-250 in *On the Way to Literacy*, APH
2. Modules 4 and 5 in *Communication and Emergent Literacy* on the Hatton sight: www.fpg.unc.edu/~edin/ ; read the Major Points in the Session Content and look over the handouts [This site has since been removed.]

Assignment Choices

Select one of the following assignments to complete and email to Bess before the third onsite in April. This assignment is a follow-up to session II on Language and Concepts. It must be completed with a young child with vision impairments in mind.

Concept learning activity

1. Select a concept that might be important for a preschooler who is visually impaired to learn. If working with such a child, get input from the family or preschool teacher on a concept that they want the child to learn. Describe the concept and why it is important for that child to learn at this time.
2. List some steps you would go through to help them learn the concept.
3. Describe several activities you could use, some of which naturally occur or could occur in the home or preschool environment that could be used to help the child learn that concept. Where might you work on it? What materials would you use? What language and communication would you emphasize? What visual, tactile and/or auditory adaptations might you use? How could you involve siblings/peers or other family members? What strategies might you use? If the child has physical disabilities, what positions or adaptive equipment might you use?
4. Write this up in at least a two page paper.
5. If you get a chance to share this with the family or preschool teacher and have them try it, then report to you how it went, do so.

Develop a teaching unit for use in a preschool class that follows a theme for one week.

This would be a great assignment to do in conjunction with another team member from your program who happens to be taking the class as well.

If you have access to the manual *Move, Touch, Do* from APH, read over the information on units from Chapter 2 (pages 7-17). Choose a unit theme that would fit easily into a week which is relevant to the child who is visually impaired in the preschool classroom you are working or consulting with. Decide on the concepts and skills that child needs to learn related to that theme. Also keep in mind the needs of the rest of the class. Describe the child(ren) and the classroom setting you plan to use the unit in. Develop a unit of activities for the week related to this concept, which would meet the needs of the child who is visually impaired as well as others in the class. Use a page schematic that overviews the week; parent letter about the weeks activities sent before or after; a daily plan of objectives and activities related to the unit theme for each center or activity time of the day-circle, snack, free play, 3 centers such as fine motor, language, art, gross motor. You can use the schedule of routine activities or centers that you use in your program. Be sure to include adaptations appropriate for the child who is visually impaired in

these activities and routines. If you have time to actually try the unit out, report on how the week went for both the child who is visually impaired and the other children. What worked well? What would you do differently, etc.

Assessment of Interaction with Objects/Scheme Assessment

Use Fieber's "Scheme Assessment Chart" with a young child with a visual impairment. After assessing the child, clearly describe how the child interacts with the objects used in the assessment. Provide background information on the child. Clearly describe alternate toys that the child may be familiar with or prefer that could be used in the assessment. Based on the assessment, describe 5 activities and toys you could use to help the child expand play schemes and/or functional object manipulation skills horizontally. For example, he/she shakes familiar bells . . . he/she may learn to also shake a maraca. Based on the assessment, describe three activities and toys you could use to help the child expand play schemes and/or functional object manipulation skills vertically. For example, if he/she hits an object on a surface, he/she may learn to hit two objects together.