Overview

Often, children receiving orientation and mobility (O&M) services in elementary school were born without sight, or had only a few years of vision before losing sight. Also, many children born with low vision receive O&M services. Born without a conceptual or clear understanding of the world around them, children who are visually impaired must be taught to systematically study environments. To do so, they must move through space, gradually acquiring mental maps of what is around them. Some children may need to be taught how to use the vision that they have. Teaching children to stay oriented in space, especially when moving, is the challenge facing O&M specialists today.

If a child in your life is visually impaired, he or she is probably receiving O&M services as a result of the Individualized Education Plan (IEP), a service plan used throughout English-speaking portions of North America. But an hour of service once a week hardly equips that child to independently explore the world! Do you want to help but aren't sure how to do so? This activity handbook certainly won't turn you into a certified O&M specialist—nor is it intended to do so! Nevertheless, it

will provide information you can use to help a child explore his or her surroundings. Its goal is to help you select games and activities that reinforce the O&M skills children learn in elementary school.

This handbook contains five lessons. The first one explains the difference between the orientation skills and mobility skills taught during the elementary school years. The second, third, and fourth lessons suggest activities you can do at home or at school to further improve sensory, concept, and motor development. The fifth lesson includes several games that provide additional practice. Note, however, that the activities and games in this handbook are not intended to replace formal O&M instruction. They are merely suggestions that can be integrated across a child's day to reinforce O&M skill development. The Appendix answers some frequently asked questions (FAQs) about O&M services. The Glossary defines some field-specific terms.

The only prerequisite for this course is having a visually impaired student, who is enrolled at the elementary school level, with whom you can work. To complete the course, you need the materials that you received

from the Hadley School. Among those materials, you'll find a release form. If you are not the child's parent or legal guardian, use this release form to obtain permission to photograph the child when completing your assignments. After you complete the third assignment, you will receive the book *Games for People With Sensory Impairments* by Lauren Lieberman and Jim Cowart. This book is used extensively in Lesson 5. If you are taking the audiocassette version of this course, you will also need your own tape recorder.

You are required to submit the assignment at the end of each lesson. These assignments enable your instructor to measure your ability to apply the information presented in the lessons. To respect the child's privacy, do **not** identify the child by full name in any assignment. Submit the assignment after completing its lesson; then wait for your instructor's reply before sending in the next assignment. Doing so will enable you to apply your instructor's feedback to subsequent assignments.

As you complete each assignment, send it to your instructor at The Hadley School for the Blind. Use the enclosed labels to mail the assignments to your

instructor. If you prefer to send your assignments electronically, the contact information card provided with your course materials includes your instructor's email address and fax number.

Now, if you're ready to further develop your child or student's skills, begin Lesson 1: What Is O&M?

Lesson 2: Sensory Skill Development

Lesson 1 distinguished between O&M skills typically taught at the elementary school level. In addition to providing formal skill-building lessons, O&M specialists also work with school personnel and family members to further develop the child's sensory skills.

Children who are visually impaired do not necessarily have more acute senses than sighted kids do. They merely pay greater attention to sounds, textures, and aromas because they have to rely more on these senses. For example, a visually impaired child might identify a favorite toy by its shape, sound, and texture—not by its color.

Because the senses play such an important role in identifying, interpreting, and using the environmental information needed for movement, O&M specialists teach children when, where, and how to use all their senses to maximum potential. That is, they teach children to interpret auditory, tactile, and olfactory information, as well as proprioceptive and kinesthetic feedback. Visually impaired children are also taught to use their residual vision. This lesson differentiates

among these types of sensory skills. Familiarizing yourself with these differences will enable you to select activities at home or at school to further develop a child's sensory skills.

Objectives

After completing this lesson, you will be able to define and give examples of the following types of sensory skill training:

a. auditory
b. tactile
c. olfactory
d. proprioceptive
e. kinesthetic
f. residual vision

Auditory Information

Auditory information is processed through the sense of hearing. Children are taught to use this sense to localize and identify sounds as well as to discriminate between sounds. Echolocation skills (i.e., the ability to use reflected sound waves to perceive the location of objects) are also developed. Whenever possible, O&M specialists use naturally occurring sounds in the

environment to develop these skills. For example, a child might be asked to turn off an alarm clock or kitchen timer to develop localization skills. Or, a student might find the cafeteria, library, office, staff room, and classroom by identifying their noises. Keys, cutlery, or coins that drop to the floor offer wonderful opportunities to discriminate between sounds. Similarly, hallways are perfect laboratories in which to develop echolocation skills: Use them to ask the student to predict when the corridor ends or turns.

Auditory Development at Home or School

Integrating the following activities into your home or classroom routine can further improve a child's sensory development:

- Help the child identify the source of sounds. For example, tell the child what is making the noise when the telephone rings, while the bathtub fills, or when the kettle boils. Whenever possible, allow her to touch the source of the sound.

- Use cassette tapes of sounds to learn new sounds that are difficult to identify unless they are isolated. Libraries often have sound-effect tapes or stories that feature specific sounds.

- Describe where people are located in relation to the child's body. For example, "Gretchen and Hans are playing cards at the table behind you."
- Similarly, describe where objects are located in relation to the child's body. For example, "Your birthday present is on the counter to your right."
- Discuss the way things sound (e.g., they squeal, squeak, whisper, or roar), especially in new environments.
- Ask the child to identify people by their gait (e.g., the speed with which they walk, the sound of their heels striking the floor).
- Roll the car or bus window down and ask the child to identify different types of vehicles by their sounds (e.g., motorcycles whine, buses belch, horse-drawn carriages clip-clop).
- Ask her to identify the type of road surface by the sound the tires make (e.g., asphalt, stones, dirt).
- Drop a penny, nickel, dime, or quarter. Ask the child which coin dropped—and have her locate it!

- Discuss the features and attributes of items as you encounter them. For instance, a telephone has a keypad with numbered buttons and a handheld receiver; one end is held against the ear, the other to the mouth. Once a phone number is dialed, a ringing or busy tone can be heard. A variety of phones are available: cell phones, pay phones, cordless phones, and so on.

- Play Pop the Car by listening to cars as they pass by. Ask the child to follow the sound of the car by pointing in the direction of its noise. Say "Pop!" when the car is in front of her.

Tactile Information

Tactile information is processed through the sense of touch. Though fingers and hands are the most obvious means of gathering such information, don't discount feet! Youngsters rely on various ground and floor surfaces to indicate whether they are walking through the park or standing in the kitchen. At the elementary school level, kids are taught to follow the edge of various surfaces, like grass, concrete, or carpet, to reach such destinations as the sidewalk, building, or living room. Moreover, skin-temperature changes

perceived due to the wind, sun, or shade are additional clues the child can use to determine whether she has reached the end of a city block, building, or porch.

Tactile Development at Home or School

Integrating the following activities into your home or classroom routine can further improve a child's tactile development:

- Whenever possible, provide concrete examples of whatever is being discussed. For example, when discussing cars, encourage the child to touch the steering wheel, dashboard, windows, seats, tires, windshield, hood, trunk, and roof.

- Present tactually interesting objects at midline (i.e., the center of the body) for the child to explore with both hands. Objects that combine light, sound, movement, or vibration encourage kids to explore further.

- Engage the child in activities that involve give-and-take actions. For example, give her differently shaped dishes (e.g., cups, saucers, glasses) that she must then load in the dishwasher.

- Go on exploration walks. Provide lots of time and opportunities to tactually explore unfamiliar objects.
- Ask the child to recognize her house by using a surface change, a fence, or a particular tree.
- When grooming, ask the child to identify the shampoo, conditioner, toothpaste, and body lotion based on texture or container.
- Hide objects in a bag for the child to identify by touch alone.
- During meals or snacks, encourage the child to systematically explore the tabletop. Consistently placing the cup, napkin, cutlery, and plate in the same places teaches her to reach in the same direction and at the same distance each time. This reduces accidental spills—and frustration!
- Identify the textures along a walking surface (e.g., cement, carpet, dirt), and connect these textures to a particular location or activity. For example, alert her to the cinder path that runs through the nature preserve to the pond.

- When dressing, ask the child to pick out the *wool* sweater, *cotton* blouse, and *fleece* vest.
- When shopping, ask the child to select items based on their texture, shape, weight, or size.
- Encourage the child to compare different types of the same item; for example, small red potatoes, medium-sized Yukon Gold potatoes, and large baking potatoes.
- Texturize artwork by adding rice, rolled oats, sand, or couscous to tempera paints.
- Together, make tactile maps of new locations using puff paints, wax-coated string, and interlocking blocks.
- At the train station, ask the child to locate the tactile indicators that designate the edge of the platform.
- Identify coins by their sizes and features. Dimes and quarters, which are the smallest and largest American coins, have a ridged or bumpy edge. Pennies and nickels, on the other hand, have a smooth edge.

- Have the child fold paper money according to its denomination; for example, leave $1 bills unfolded; then fold $5 bills lengthwise, $10 bills by width, and $20 bills by length and by width.
- Provide plenty of opportunities to take coins and bills out of a wallet, then to put change back in the wallet.
- Especially in new environments, discuss the way things feel (e.g., wet, circular, patterned, cold, hard, rough).
- Identify what things are made of (e.g., stone, brick, paper, metal, carpet).

Olfactory Information

Olfactory information is processed through the sense of smell. Children can use their noses to indicate whether they are entering a bakery or a laundry, standing next to the garbage or a rose, opening a can of tuna fish or dog food. Nevertheless, if you've ever shopped for perfume or cologne, you know that the brain's ability to discriminate aromas wears off after 15 minutes or so. Therefore, the olfactory sense is best used with other senses to reliably identify locations or items. For

example, the child might reliably locate the fruit and vegetable section of a supermarket by hearing the misters moisten the vegetables, tasting a sample of cut fruit, or feeling ears of corn.

Olfactory Development at Home or School

Integrating the following activities into your home or classroom routine can further improve the child's olfactory development:

- Ask the child to identify her teachers or family members by their cologne or perfume.
- Especially in new environments, discuss the way things smell (e.g., sour, dank, floral).
- Identify locations by their smell (e.g., bakeries, gas stations, construction sites).
- While walking through the school, ask the child to identify various areas by their odors (e.g., gym, cafeteria, industrial arts classroom).
- When shopping, ask the child to identify different types of the same item by their aroma—for instance, cheddar, Roquefort, and Swiss cheese.

- Ask the child to identify what's for dinner based on cooking odors.
- Incorporate smelly markers and glue in art projects.
- Reward skill development with scratch-and-sniff stickers.

Proprioceptive Feedback

Proprioceptive feedback provides information about posture and is derived from movement, body position, and sensory experience—for example, walking up a flight of stairs, swinging on a swing set, or playing on a seesaw. It is based primarily on the mind's ability to perceive, without using the other senses, the location or relationship of body parts in stationary positions. That is, you can tell when your elbow is bent, your legs are crossed, or your head is cocked. The best ways for children to fully develop this sense is through such gross motor activities as running, jumping, climbing, and so on. Therefore, O&M specialists frequently encourage their students to swing, climb, and slide on playground equipment. These experiences also provide opportunities to refine laterality skills (i.e., the difference between left and right), improve body

awareness (e.g., the difference between feet and hands), as well as increase balance and strength.

Proprioceptive Development at Home or School

Integrating the following activities into your home or classroom routine can further improve a child's proprioceptive development:

- While riding in the car or on the school bus, ask the child to identify left turns, right turns, and full stops.
- When walking with a sighted guide, identify these turns, as well.
- Ask the child to indicate when the bus or car goes over train tracks or bumps.
- Ask her to indicate when she's traveling up- or downhill.
- Ask her whether she is turning north, south, east, or west.
- Set up an obstacle course for the child to negotiate. Better yet, ask the child to design the obstacle course!

- While the child is using playground equipment, ask her to indicate when she's hanging upside down, going down the slide, or swinging toward the sky.
- When swinging, ask the child to identify when she is coming toward you or moving away from you. Have her determine if she is moving up or down.
- Swing the child in a circle; then stop. Ask her to point to a window, door, or closet.
- Overcome any initial anxiety about accessing an escalator by teaching the child to get on and off using a skating type of step.
- On escalators or in elevators, ask whether the child is going up or down.
- Take the child and a buddy roller-skating or ice-skating.

Kinesthetic Feedback

Kinesthetic feedback entails knowing where a body part is in relation to space—for example, holding the cane in the dominant hand in the center of the body. This type of feedback enables you not only to get the feel of a particular movement, but also to sense

whether it feels right or wrong—for instance, walking with a cane or maintaining a proper head position. Kinesthetic feedback prompts you to “make it right” or to correct an inappropriate body position. It also helps you recognize time and distance measurements; for example, walking one block usually takes 5 minutes, not 30. Kinesthetic feedback is particularly important for balance, posture, and efficient movement.

Kinesthetic Awareness at Home or School

Integrating the following activities into your home or classroom routine can further improve a child’s kinesthetic development:

- When taking trips in the community, make comparisons about the time and distance it takes to get to different locations. Starting from home, does it take longer to go to the grocery store or to the swimming pool? How long does it take to go to each place?

- Use songs with several verses (e.g., “The Ants Go Marching”) to gauge the time-distance between two locations.

- Contrast movement terms. For example, ask the child to walk quickly, then slowly; to tiptoe, then stomp; to turn like a snail, then like a rabbit; to move lethargically, then energetically.
- Take the child and a buddy horseback riding.
- Ask the child to demonstrate a variety of movements (e.g., march, skip, bend, sway, twist, leap). Then add directions (step forward, backward, sideways).
- Send the child on errands with special movement directions—for example, "Jump to your bedroom," "Skip to the playground," "Walk sideways to the front door," "Walk backward to the phone."
- Add time frames or timed challenges when completing movement tasks. For instance, time how long it takes to walk from the front to the back of the house; ask the child to walk to the cafeteria in less than 5 minutes.
- Go on speed-walking practices with guided assistance to develop an awareness of what it feels like to walk quickly or at a normal pace for 10 to 15 minutes.

- Have the child locate and identify a few familiar objects, noting the distance at which she first recognizes them. Make it a game to determine if she can recognize the same object from ever-increasing distances with practice.

- Place construction-paper turkeys, reindeer, valentines, or pumpkins at various heights on contrasting backgrounds. Have the child hunt for these seasonal items.

- Ask the child to explain an activity that she does. Better yet, have her teach a friend how to do it.

Residual Vision

O&M specialists train visually impaired children to effectively use their remaining functional vision. This is an area that is often taken for granted; indeed, many people assume it develops naturally. Nevertheless, children must be taught how, where, and when to look for objects, clues, and landmarks. For example, the child might be taught to use color clues to find bananas in the grocery store or where to look at an intersection to identify a street sign. She might be taught to scan the path ahead to look for other pedestrians or to use a

monocular to identify the number on the front and side of a city bus.

Residual Vision Activities at Home or School

Integrating the following activities into your home or classroom routine can further improve the child's residual vision:

- Use color contrast to help a visually impaired youngster discriminate objects. For example, pour white milk into a dark cup, play a board game on a dark surface, or tack dark treads onto steps of a lighter color.

- Intentionally place objects in a variety of positions, orientations, or unusual locations. For example, turn a chair upside down or place a wall clock on the floor. Challenge the student to not only identify the object that was moved, but to right it as well.

- Ask the student to use shape, color, and contextual clues to identify common environmental objects at various distances, like a bulletin board, desk, or chair. Gradually walk closer to confirm their identities.

- Partially cover an object. Ask the student to identify it based on available visual clues.
- Give the student a set of photographs of common objects. Ask her to group them by category—for example, traffic signs or kitchen implements.
- Take the student window-shopping. Ask her to identify the type of store based on the items on display in the window.
- Ask the student to identify street signs by their shapes. Quiz her as to their meanings.
- Use a monocular or child binoculars to locate a particular sign, address, or bus number.
- Carry a clipboard with a checklist of environmental objects. Check them off as the student encounters them.
- Once your student can successfully identify landmarks along travel routes, ask her to plan a route for *you* to follow.

Summary

Because the senses play such an important role in identifying, interpreting, and using the environmental information needed for movement, O&M specialists teach children when, where, and how to use all their senses to maximum potential. That is, they teach children to interpret auditory, tactile, and olfactory information, as well as proprioceptive and kinesthetic feedback. Visually impaired children are also taught to use their residual vision. This lesson differentiated among these types of sensory skills. Distinguishing among them will enable you to select activities at home or at school to further develop the child's sensory skills.

Assignment 2

Complete this assignment in the medium of your choice. Begin by giving your full name, address, and phone number. Also indicate the course title, Assignment 2, your instructor's name, and the date. Then provide your answers. Be sure to indicate the question number along with each answer. Instructions for sending assignments can be found in the Overview to the course.

1. Identify activities in three different sensory areas that the child could practice at home, school, or in the community. What type of sensory skill does each activity promote?

2. Describe, in writing or by using photos with captions, the child engaged in each activity that you identified in Question 1. If you are not the child's parent or legal guardian, use the release form that is included with your course materials to obtain permission to photograph the child.

3. How did the child overcome obstacles, if any, while engaged in these activities?

4. Suggest a different location in which the child could practice each of these activities.

5. Describe, in writing or by using photos with captions, the child teaching someone else to perform these activities.