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| **Summer 2009: Putting Orientation Back into O&M****Date:** Wednesday, August 19 @ 13:30:17 MST**Putting Orientation Back into O&M: Teaching Concepts to Young Students****Diane Brauner, COMS\***Diane Brauner COMS, Inc., Pittsboro, NC\*Please address correspondence to dianebrauner@embarqmail.com**Abstract**Orientation skills are the tools that should be in every student's toolbox. Orientation skills are learned skills; orientation techniques can be broken down into simple steps and should be systematically taught to all preschool/early elementary students with visual impairments. As orientation and mobility instructors, we need to be aware of not only what to teach but also how to teach orientation skills.**Keywords:** orientation and mobility; preschool students; elementary students**Introduction**Have you ever wondered why some cane travelers are independent on all routes while others tend to be rote route travelers, unable to determine new routes and frequently unable to make corrections if lost? The independent cane traveler has numerous orientation and mobility (O&M) skills or tools in his or her toolbox and knows when to pull out and use a specific tool. Rote travelers tend to focus on specific directions on a route, often without a mental map of the whole area. Orientation skills are the tools that should be in every student's toolbox. Orientation skills (knowing where you are, what is around you, where you are in relationship to other things, and where you are going) are learned skills; orientation techniques can be broken down into simple steps and should be systematically taught to all preschool/early elementary students with visual impairments. Most students with multiple disabilities (developmental age equivalent to preschool/kindergarten) can also benefit from these same orientation concepts with little or no modifications. Students with multiple disabilities may need additional time to learn these orientation concepts and more repetition to learn the concepts and may be limited in their abilities to generalize these concepts to other environments.As O&M instructors, we need to be aware of not only what to teach but also how to teach O&M skills. Focusing on cane techniques and learning specific routes are important; however, this method, when used in isolation, tends to encourage rote route skills for many of our O&M students. Focusing on orientation skills promotes the student's ability to be able to develop spatial concepts and a mental map, to develop helpful routines when lost, and to generalize skills learned in one environment to other environments.**When Do We Teach Orientation Skills?**The first step is to start teaching orientation skills early. There are wonderful (and simple) orientation activities that can be done with infants and toddlers. As a preschooler begins to walk, his or her world immediately begins to expand; with systematic instruction from an O&M instructor, the preschooler's orientation skills as well as mobility skills will take off. (In the United States, public school O&M instructors are responsible for students 3 years old and older, so this article addresses orientation skills for preschoolers and older.)Observing older O&M students can be enlightening when they identify and analyze what types of orientation problems/issues these students demonstrate, along with their O&M strengths. By breaking down these habitual problems into simple steps, it is then possible to begin teaching the basic foundation skills to younger students in order to build strong lifelong orientation skills. It is easier to systematically teach good foundation orientation skills to young students (in small, age-appropriate steps) than to try to retrain entrenched bad habits in teens and adults.**What Are Foundation Orientation Skills?**Good directions are an essential part of successfully completing a route. What if you were given the following directions? We are going to “that place.” To get there, you “go this way,” then “turn by the thingy.” Go until you get to “that street.” It is beside the “what-you-ma-call-it.”These directions are ineffective because they lack all the crucial information, such as street names, landmarks, and which direction to turn. O&M students need to know all this information in order to travel independently. O&M students should be able to locate, identify, and then use this information—all part of their “foundation orientation skills.”The four foundation orientation skills are the following:* Naming and labeling (name hallways, rooms, landmarks, streets, and so on)
* Landmarks and clues (identify and use landmarks and clues)
* Intersections and turns (identify intersections and have spatial awareness of turns)
* Directions (understand the spatial concepts of right, left, straight ahead, and behind)

These are the four basic things that a student with visual impairments must master in order to have good orientation.**How to Teach Foundation Orientation Skills****Naming and Labeling**O&M instructors cannot successfully teach routes if the student does not know the specific names for important landmarks, hallways, streets, and so on. Remember the previous directions where you were supposed to turn by the “thingy” and go until “that street”? In order to successfully follow the directions, you must know what “thingy” means (landmark such as McDonald's) and the name of the street (Franklin Street).With younger students (preschoolers and older), O&M instructors should consistently name all classrooms, doors, areas around the school, and hallways. (Teachers/parents should also be recruited to help follow through with naming skills.) Be sure to use names that make sense to the student, such as calling the room by their teacher's name. There are multiple doors in most school hallways; naming a door “door” does not help distinguish one door from another door. Be sure to teach adjectives along with the noun (Mrs. Jones's door, glass front door, and so on). Be sure to name the hallways as well (cafeteria hallway, front door hallway). Naming hallways and learning the concept that the hallway is linear, not just one point like a specific door, are crucial prerequisites to teaching school intersections and street concepts. Students should also identify and name important landmarks around the school (kindergarten bathrooms, front door rug). Preschoolers can begin naming objects (teacher's desk, cubbies) and areas in their classroom (writing center, housekeeping center). These kids can also begin to learn to categorize what might be found in each center (writing center  =  crayons, brailler; housekeeping center  =  dishes, sink). Students can also categorize rooms at home (family room  =  couch, TV; kitchen  =  stove, refrigerator). When orienting a student to the playground, be sure to name the play structures (tunnel slide, curvy slide). Also name streets and stores—name everything in the school, home, and community environments that the student has contact with.A typical preschool/kindergarten skill is to identify shapes and colors. Our students with visual impairments should learn to identify and name shapes, colors (if appropriate), and textures. This is not only a typical preschool/kindergarten goal but also a prebraille/literacy skill and O&M prerequisite for “tactile markers,” “tactile door markers,” and tactile maps. Tactile markers are textured symbols that are used to help the student distinguish specific areas (student's cubby, table). Use different shapes, textures, and colors when making tactile markers, as one student might focus on the texture to distinguish the marker, and another student might focus on the shape. Tactile markers should be small—a student can identify the shapes best if it fits in his or her small hand. Tactile door markers are similar textured markers that are used to distinguish doors/classrooms. The tactile door markers are adhered to the wall at the child's eye height (if there is some vision) or hand height (if no vision), close to the door frame (student finds the wall, searches for the frame, and then follows the frame up/down until he or she locates the marker), and on the same side of the door as the doorknob (safety reasons). Initially, the student should be encouraged to reach up and touch the tactile door marker every time he or she enters the classroom. Tactile door markers are used to teach basic orientation concepts (by helping the student easily identify a specific door); however, tactile door markers are also foundation orientation concepts, as they help the student have goal-directed routes (vs. wandering), are motivating, and are symbols that can also be used to label the same locations on a tactile map. Simple tactile maps are an easy, concrete way for young students to understand a big environment.By kindergarten, most academic students are ready to learn and use basic “self-familiarization” skills. Self-familiarization is a mental mapping technique in which a room (or business) is systematically described. Most rooms/businesses are basically in the shape of a square/rectangle. Each of the four walls is numbered, and the main characteristics (or departments) are associated with each wall. Wall #1 is always the main entrance door. For example, in the classroom, Wall #1 has the hallway door, coat hooks, and bathroom door. Wall #2 (to the right) has the whiteboard and circle area. Wall #3 (back of room) has the windows and centers. Wall #4 (to left when back is to the hallway door) has the teacher's desk and cubbies. When initially self-familiarizing the room, the student should start by walking along the edges/walls (if possible) of the room before learning the interior of the room. Remember the difference between teaching rote routes versus tools that can be generalized to other areas? The self-familiarization technique is a prime example of teaching “O&M tools.” If the student is exposed only to specific routes in the interior of the classroom, he or she will be caught up on locating the next specific landmark; the student will not be thinking about where he or she is in relationship to other main areas within the classroom (no mental map). For example, on a rote route from the circle area to the coat hooks, the student will be looking for a desk to trail through the open space but will ignore the sounds coming from the open door on Wall #1. The student will not be able to compensate if there are unfamiliar obstacles in his or her path, nor will he or she be able to independently determine new routes.Each main characteristic along the wall should be named. From each characteristic, have the student point to the other main characteristics. If in the kitchen center, have the student listen for the hallway door and point to it. Ask the student to point to and name the various walls (#1, #4). Help the student name the direction as well (straight ahead, behind, right, left). Ask the student to turn, then repeat naming and pointing. In a business (such as Wal-Mart), the student will associate the four main walls with departments. Wall #1 has the front doors, cash registers, and pharmacy; Wall #2 (right side of store) has grocery department; Wall #3 (back of store) has electronics, camera counter, and toys; and Wall #4 (left side of store when back is to the front doors) has automotive, hardware, and lawn and garden.Teaching self-familiarization should start in preschool with the concept of a square (square has four sides). Find a small room in the school (such as a teacher's lounge) to reinforce self-familiarization skills. In a teacher's lounge, Wall #1 is the door, Wall #2 has the refrigerator and microwave, Wall #3 has the bathroom door and table, and Wall #4 has the couch. Have the student explore the office, fort/playhouse on the playground, elevator, and so on. Be creative—self-familiarization techniques can be taught almost anywhere. Self-familiarization skills can easily lead to and be reinforced by the use of simple tactile maps. When making a tactile map of the classroom, be sure to encourage the same spatial (mental map) techniques that have already been introduced. With all maps, have the “bottom” of the map (edge closest to the student) as Wall #1; Wall #3 is the “top” of the map (“back” of the room”; the edge farthest from the student). Do not have the student rotate the map as he or she “travels” along map routes. Encourage the student to develop a mental map of the area and verbalize directions by walking toward a wall/department rather than saying “turn left/right.” (Go to Wall #1, front doors.) There are always landmarks within the store that help the student find specific areas. (When looking for the front door—on Wall #1—the student can hear the cash registers and, using his or her mental map, can remember that the cash registers are also on Wall #1 by the front doors.) Remember how the student pointed to the main areas and named the walls when walking around the room from different locations? This helps the student establish specific locations in relationship to other locations as he or she moves through space versus rote routes. When a young student reverses the route, he or she becomes confused as the left/right directions change. (The cash registers that were on the left when walking toward Wall #4 are now to the right when walking toward Wall #2.) It is easier for a young student to develop good mental maps and spatial concepts using these techniques. As the student matures, he or she will frequently be able to use right/left directions (reversing the directions as he or she reverses more complex O&M routes).**Landmarks and Clues**As discussed, all landmarks and clues should be named. The next step is to teach the student to identify these landmarks when traveling routes. Initially, preschoolers want to touch everything with their hands. There are numerous opportunities for a young student to touch and explore with their hands; however, it is important to teach the student to locate and identify the landmark with an adaptive mobility device (AMD; commonly known as a precane) or long cane rather than his or her hand. It is easy for most preschoolers to learn to identify objects by the auditory sound when their cane bumps the object, especially a familiar object. The term “cane” is used to mean either AMD or long cane. Preschoolers are overwhelmed when asked to simultaneously focus on learning orientation skills and trying to use a safe long cane technique. It is recommended to teach orientation concepts early (while the student is using the less challenging AMD) and switching to the long cane after foundation orientation skills are mastered. It is harder for a young student to notice subtle flooring differences, such as when the cane locates a rug—the student will often be startled when his or her foot finds the rug. It is very important to teach the student to pay attention to surface changes (vs. locating objects), as this is a safety skill for locating drop-offs.Teach the student to “bump and walk up” when the cane locates an object (vs. reaching out with their hands). After the cane “bumps” the object, the student should “walk up” to the object until the cane is upright in front of his or her body. This helps the student learn the spatial distance between the end of the cane and his or her body—how many steps he or she will take before actually reaching the object with his or her body. It is also a critical safety issue, especially when locating doors. If kept in the correct position, the cane will help stop a door from unexpectedly being opened and crashing into the student. “Bump and walk up” also prepares a student for locating and walking safely toward a drop-off. As the student learns the spatial concept of how far the cane is out in front of him or her, the student will be more comfortable when locating drop-offs, as he or she will understand how much reaction time the cane truly gives.Landmarks can be auditory (hearing the noisy cafeteria, echo in bathroom), tactile (touching objects), and/or olfactory (smelling leather in shoe department, food in the cafeteria). Again, landmarks should first be named, then the student should be able to locate/identify the landmark, and, finally, the student should use the landmark for orientation purposes (at the bathroom, turn right).**Intersections and Turns**Most students appear to travel routes successfully as long as they do not have to consciously make a turn. Understanding the concept of an intersection is often the main issue. Naming hallways and understanding that the halls are linear are critical concepts when teaching intersections. Teach the student that an intersection is where two hallways (sidewalks, aisles, or streets) meet. If the student is in an intersection, ask him or her to name the two hallways (main hallway and cafeteria hallway; initially, noisy hallways, such as the cafeteria or gym, are best) and then have the student point to specific areas (noisy cafeteria, squeaky front door). Remember to reinforce spatial relationships by having the student turn and repeat naming and pointing to the various hallways/areas.Most preschoolers do not realize when they have made a turn. They will frequently shoreline a wall (or hand trail a desk) and follow it around the corner without realizing they have completed a turn. The concept of a turn can be taught by having the student put his or her back to the wall, then turn and put his or her right shoulder to the wall, turn and face the wall, and turn and put his or her left shoulder to the wall. Be sure and have the student point to and name various areas while practicing turns. When teaching a turn in an intersection, have the student initially make the turn by shore lining; stop just after the turn and have the student name and point to the two different hallways and then name and point to various areas down each hallway. At the same corner, have the student “hop” into the main hallway, then “hop” back to the cafeteria hallway. Practice having the student make the same turn in the middle of the hallways—without shore lining the wall. Initially, ask the student to hop every time he or she encounters an intersection—kids are very motivated to hop, and it allows the O&M instructor to instantly know if the student is aware of the intersection. Initially, when traveling through intersections, teach the phrase “hop, stop, and figure it out.” Have the student identify the intersection and hop, stop in the middle of the intersection, and then figure out where he or she is and where he or she needs to go. “Figure it out” is a verbal prompt to determine “what's here?”—identify things and sounds nearby (cafeteria sounds to the left, office to right)—and “what's next?”—where you are going and how do you get there (turn left in cafeteria hall). This routine encourages the student to develop critical thinking skills as he or she travels along routes (vs. wandering down the hallway). “Figure it out” can be expanded to encourage independence when the student becomes lost. The student can be prompted/referred back to “figure it out” by asking “what's here?” (gym sounds), “what's different?” (identify what should be along the route versus what is along the route, e.g., gym sounds instead of kindergarten hall), and “what's next?” (where you are going and how to correct your route to get there, e.g., square off from the gym and go to the kindergarten hallway intersection).**Directions**Naming, identifying intersections, making turns, and directions are all intertwined. Always include the terms “right,” “left,” “front,” and “behind.” Sighted students know these directional concepts in kindergarten; our students typically know right/left concepts as preschoolers. Young students first learn to raise their right/left hand. Pointing right/left is the next step. Have the student raise the right/left hand, then point right/left. Pointing is typically difficult for our students, as they tend to point using limp arms/hands. To teach how to physically point, start with the student's back against the wall. Have him or her reach out and touch an object (or the O&M instructor) that is also against the wall. The student should be encouraged to have a straight elbow and to press his or her arm against the wall at shoulder height. The student should make a fist; using an index finger only, he or she should touch the object/instructor. The object/instructor should move away, and the student should point again, pretending that he or she is about to touch the object. Later, when the student is waiting to cross a street and wants a car to go, he or she can firmly point to the car and then forcefully move his or her hand to point out the direction the car should go. (Many of our students have ineffective, limp-handed waves when trying to tell a car to go.) “Distance right/left” is a more abstract concept. Teach distance right/left by having the student put his or her back against the wall with the O&M instructor on the student's right. Have the student point to the O&M instructor and verbalize “right.” The O&M instructor can move around the student (left side, front, behind—possibly using a motivating, noisy toy). Gradually move farther away from the student (out of arm's reach) and repeat. Then have the student point to distant auditory landmarks (noisy cafeteria) and name the distant direction.There is a limited window of opportunity in which to easily teach spatial concepts to young students with visual impairments. When foundation orientation concepts—especially spatial concepts—are introduced early, preschoolers effortlessly incorporate these concepts into their expanding world. As a young student's world expands from the home to the preschool classroom, school building, and community, his or her orientation concepts should also expand. For most congenitally blind travelers, these orientation skills have to be introduced as the student is first exploring new environments so that “tuning in” to landmarks becomes as natural as walking with a cane. Each foundation orientation skill is a tool in the student's toolbox—enabling the student to travel in a variety of environments successfully and independently. A good traveler is aware of multiple landmarks and knows how to use these landmarks for orientation purposes. He or she has mental maps of familiar areas and is able to use self-familiarization techniques to develop mental maps of new areas. By naming hallways, streets, and landmarks and developing a mental map of these landmarks, along with other established orientation skills, a student can independently figure out shortcuts and develop new routes. This good traveler listens and develops new landmarks to help travel old and new routes. A rote adult traveler tends to “tune out” (is unaware) of landmarks and/or does not use the landmark for orientation purposes; he or she rarely has a mental map of the surrounding environment. It is very difficult for an established adult rote traveler to relearn the way to process orientation concepts in order to become a more independent traveler. Introducing students to foundation orientation concepts early, in a systematic, step-by-step, age-appropriate manner, will maximize each student's potential to become a successful, independent traveler.  |

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