

Non-Visual Multi-Sensory Experiences for Students with Multiple Disabilities ¹

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Vision is a motivating sense. Therefore, when a student has a visual impairment, teachers need to offer experiences that utilize students' other senses to increase engagement, participation, and support their concept development. It can be difficult for a student with a visual impairment to understand their environment. By offering multi-sensory learning experiences, students learn more about their environment, learn concepts from part to whole, and improve their level of active participation. Three techniques to consider are providing experiences with real objects, considering the sensory components, and selecting activities that are meaningful to the student.

Using Real Objects

Students benefit from using real objects and materials that they can touch, manipulate, and explore. The use of real objects supports students' concept development as they learn all the

¹ <https://www.pathstoliteracy.org/non-visual-multi-sensory-experiences-for-students-with-multiple-disabilities/>



characteristics of the object. The use of real objects can support students' understanding of part to whole.

For example, consider using real food instead of play food when teaching concepts in a story, grocery shopping practice, or identifying foods for a recipe. Using play food as a prop does not provide accurate information for the student. The toy orange may look the same as a real orange, yet it lacks other critical features such as the correct weight, texture, and smell. A real orange can be peeled and sectioned. An orange with the peel is dry and once the peel is removed the orange is cold, wet, and sticky. Students need all the information about the orange to understand it.



Figure 1 Student petting and then holding a real bunny

Sensory Components

A second strategy is to consider the sensory components of the activity. Identify the sounds, textures, and smells the student may encounter. Create a big picture of the experience. Identify any sensory hesitations the student may experience such as if sounds are startling and if touching certain textures causes the student to resist the activity.

It is important to present prop box items that represent essential components of the story. Focus on all the sensory information of the activity. Consider sounds, tactile, and smells. Sounds may include your voice, the sound of the pages being turned, and the sounds of the materials from the story box. Consider touch- what is the student touching in their chair- a hard table or tray, squishy arm rests, the material of their clothes. Other things they may be touching are braille, textures in the book, the book and pages, and the various textures of each object. Finally think about smells- the paper, plastic, rubber, fabric etc. Each object has a scent. As you are working your way through the activity, attend to the amount of sensory information the student is receiving and comprehending, and whether the student demonstrates any preferences or sensory hesitations. Adjust the activity to encourage their engagement and respect their aversions or resistance to the sensory input.



Figure 2 Student strolling through a garden with blooming flowers.

Meaningful Activities

The third strategy is to select meaningful activities for the student. Think about the goal of the activity, why you want to teach it, and how it will benefit the student. Identify the sensory learning channel you will focus on during the lesson. Consider if sounds or touch are important. To create meaningful activities, put the activity or lesson within a meaningful context.

Take the student on a sound walk- through the activity, the classroom, the school, and outdoors. Identify sounds and put them into context for the student. When appropriate, have the student recreate or touch the object making the sound. Sounds that may be of interest are the doors opening and closing, chairs being moved, a swing, a toy, running water etc. It may be helpful if you as the instructor walk through the space with your eyes closed and listen to the various sounds. This can help you focus on the sound without relying on your vision for identifying information.

Many students are working on identifying and naming objects. Instead of sitting down to work on the goal by having several objects to name (such as a book, cup, ball or shoe) use those items within context. For example, a student may need to identify and/or name a ball. Play ball with the student repeatedly. As you are playing, emphasize the word ball and provide descriptive information. Talk about the experience while you are playing. As the student becomes more familiar with the activity you can use different types of balls. If you want to assess the student to determine if they can identify and/or name the ball by touch, have a ball and an unrelated item(s) near them. As you introduce the activity, ask them to touch or pick up the ball so that you can play. The student may need time to touch the items in their defined workspace to select it. Learning about a ball within a ball activity is more meaningful than being shown several objects and asking the student to pick up the requested object.

Visual information provides a significant amount of information to any learner. However, when a student has a visual impairment and multiple disabilities, it is critical to teach compensatory skills to improve sensory integration. Touch, taste, sound, and smell also provide meaningful information that can be engaging and interesting to a student. When students have the opportunity for frequent, repeated multi-sensory activities, they learn to use their other senses to process and comprehend information.



Figure 3 Student looking, touching, exploring, and picking a strawberry.