Accessible Science Equipment

DO-IT

Promoting the engagement of students with disabilities

Sometimes all it takes for a student with a disability to participate in a science activity is planning ahead when selecting products for a science lab. Below are examples of products the DO-IT Center has purchased to make science activities accessible to all students. The following products are examples; this list does not imply endorsement by DO-IT.

Accessible Measuring Devices

Measuring devices with large print and high contrast markings are accessible to students with low vision. In addition, it might be easier for a student who has limited hand or finger control to use a syringe rather than standard measuring spoons to measure liquids. The following everyday items are available at retailers nationwide.

- Foldable ruler with large, high contrast markings
- Tape measure with large, high contrast markings
- Cloth tape measure
- Measuring cup with large, high contrast markings
- Measuring spoons with large, high contrast markings
- Cooking syringe (remove needles)

Equipment Labeled with Tactile Braille

A hand-held Braille labeler (e.g., from Maxi-Aids) can be used to add Braille labels to equipment. In addition, Brailled rulers and protractors can be purchased from a variety of companies, including the following retailers.

- Maxi-Aids (*maxiaids.com*)
- Independent Living Aids (*independentliving.com*)
- SmartHealth (*schoolhealth.com*)

Talking Equipment

Equipment with voice output—as well as large print, and high contrast displays—can benefit students with visual impairments, as well as those with some types of learning disabilities. Examples of products and retailers follow:

- Tape measure that states the length when a button is pressed (Maxi-Aids)
- Scale that announces the weight of item placed on a platform or in a bowl (Independent Living Aids)
- Digital thermometer that provides a voice reading when the tip of the probe is applied to the substance to be measured (Maxi-Aids)
- Scientific calculator that features a large display, high contrast keys, voice output, and headphone option (Sci-Plus 300 Large Display Talking Calculator, SchoolHealth)
- Talking dictionary that pronounces words and definitions, with options that include phonetic spelling correction and personal dictionary (Franklin Electronic Publishers)
- Reading pen that can be used to scan, define, and pronounce words from printed material (SchoolHealth)
- Liquid level indicator to avoid over-filling a container; when the liquid reaches the tip of its two prongs, the unit makes a loud persistent sound and/or vibrates (Independent Living Aids)
- Talking color identifier which recognizes all the common colors and uses qualifiers, such as light, dark, pale, and vivid (Color Teller, SchoolHealth)

Stirring and Filling Devices

Some products benefit students who otherwise have difficulty filling containers and/or stirring.

- Magnetic mini-stirrer for students who have difficulty stirring in the traditional manner. The magnetic stir bar is placed in the mixture, and the knob can be used to adjust the speed (Magnetic Mini-Stirrer, eNasco, *enasco.com*).
- Pipette-filling device with a textured grip and hand-neutral design for right- and left-handed users for students who would have trouble using a traditional pipette (Rota-Filler 3000, Heathrow Scientific, *heathrowscientific.com*).

Non-slip Mats

Non-slip mats can be cut to fit most surfaces; this helps those with mobility issues keep items from tipping over or rolling away (Slip-Stop Matting, Fisherbrand, *fishersci.com*).

Tactile Image Creation

Puffy paints and waxed string can be used to add dimension and tactility to flat lines or drawings for students with visual impairments and are often available in craft stores.

Magnifying Devices

Magnifying devices increase the size of text and images and are commonly available in optical shops, bookstores, and online.

Safe Cylinders and Beakers

Plastic, shatterproof cylinders and beakers and items with handles and lids are often available through vendors who sell science lab products.

About DO-IT

DO-IT (Disabilities, Opportunities, Internetworking, and Technology) serves to increase the successful participation of individuals with disabilities in challenging academic programs such as those in science, engineering, mathematics, and technology. Primary funding for DO-IT is provided by the National Science Foundation, the State of Washington, and the U.S. Department of Education.

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