

Tools for Accessing Different Environments and Increasing Self-Sufficiency

Students with a visual impairment may use a variety of tools (assistive technology), depending on the setting and situation. Ease of use, cost, convenience, portability, the setting, and the visual demands will dictate which tool(s) might work the best. Standard assistive technology tools for students who are blind or have low vision include optical devices (e.g., magnifiers, telescopes), talking calculators, electronic braille devices, video magnifiers, braille notetakers, canes, computers with JAWS or screen enlargement software, and iOS devices. Tools may be optimized by lighting where needed by the student. Ultimately, independent access to their environments will contribute to a student's self-confidence, self-advocacy, and self-determination. The following lesson ideas will require instruction with the TVI, COMS, and parents.

Ideas for Using Tools in the Home

Snack and Meal Preparation

Use a magnifier to follow recipes to prepare a snack or simple meal. Recipes can be found on packages (e.g., taco seasoning, pudding, rice), in cook books, or printed from a web site.

Use a magnifier to look at food labels, particularly salt, sugar, and fat content. Discuss the affect these have on health, and what constitutes a healthy diet.

Use a magnifier to read numbers on keypads and dials for the oven, stove, and microwave when cooking.

Use a magnifier to read food expiration dates on items stored in the pantry and refrigerator. Combine this with the "sniff" test and discuss discarding food that is turning bad.

Use voiceover on an iOS device to follow/prepare a simple recipe.

Health and Appearance

Use a magnifier to read medicine packaging, including dosage instructions, expiration dates, and refills for prescription medications. Discuss steps to take if you feel you have taken too much of any medication (poison hotline).

Use magnifier to read a thermometer, or a talking thermometer. Discuss what constitutes a fever, and how this information is used.

Use a magnifying mirror to check skin, teeth, and hair, or to look closely at eyes for applying eye makeup.

Recreation and Entertainment

Use a magnifier to read instructions for games, as well as print on game cards and boards.

Use print enlargement software to read information on a computer monitor (email, internet searches, Facebook, articles).

Use a telescope to watch TV and/or follow action while playing with a Wii.

Use a magnifier to read parts of a favorite magazine/newspaper. Discuss a selected topic.

Use a magnifier for hobbies such as scrapbooking, coin/card/stamp/rock collecting.

Use a telescope to follow the action of pets in the neighborhood, and/or birds and squirrels in the yard.

Use a magnifier to read a book to a younger sibling.

Ideas for Using Tools in the Community

Use a telescope to locate stores and read signs in the mall.

Use both a telescope and magnifier to complete a scavenger hunt in a grocery store, using a list of things to find along with their prices.

Use a telescope to order from overhead menus in fast food restaurants.

Use a magnifier to order from table menus.

Visit a zoo, rodeo, or stock show to watch the action and observe animals.

Plan a trip in the community, using public transportation. Use a magnifier to read bus routes, and a telescope to watch for bus numbers.

Use a telescope at a sporting event. Keep track of the score on the scoreboard, relate action as it occurs, and locate people in the crowd.

Attend a museum, using the telescope to stand back and view the art work.

Ideas for Using Tools in the School

For Middle School and High School Students

Start with a conversation with the student about each class, and the kinds of visual tasks the student is required to complete. Create a chart, writing in how the student currently accesses school assignments. A completed chart might look like this:

SUBJECT	TEXTBOOKS	HANDOUTS	OVERHEAD	BOARD	INTERNET
English	Large Print	Reg./Lg. Print	Print copy	Print copy	Zoomtext
Math	Reg. Print	Large Print	“can see fine”	Walk to Board	n/a
Science	Reg. Print	Large Print	Can’t see	“can see fine”	Pretty hard to read units

Use this information as a starting point for increasing independence in the student.

Lessons to consider:

Read smaller print size of an assignment currently completed with large print, using a magnifier to enlarge the print instead. This takes practice!

Use a magnifier to read information on maps, charts, and graphs, particularly in the student's math, science, and social studies/history books, including information printed from the internet.

Access the board/overhead using a telescope. Practice reading and copying from the board, increasing the number of words copied per view. The goal is to read/remember/write down as many as 10 words at a time, checking for accuracy.

Access the board/overhead using a video magnifier. Practice locating information, focusing, and taking notes.

Access the board/overhead using a tablet. Practice locating, saving, and storing information.

Use a magnifier to read notations on measurement devices (linear, as well as volume).

For Pre-Primer through Elementary Students

For 3-5 year olds, explore the properties of magnifiers by looking at bugs, leaves, shells, and other 3-dimensional objects.

For 4-5 year olds, explore the properties of a telescope outside, locating play equipment, friends, moving vehicles, etc. Inside, use the telescope to watch as the teacher conducts a story time or demonstrates a lesson.

For 1st-6th graders, teach students how to use a telescope to view and copy information placed at a distance.

For 1st-6th graders, teach students how to use a magnifier to increase reading fluency on smaller print sizes.

Practice telescope skills on field trips.

For students who require larger print on computer monitors, provide instruction with enlargement software (e.g., Zoomtext).

Teach accessibility options for computers, cell phones, and tablets.

Use a monocular in games (e.g., Battleship game graphic posted to a wall; mazes placed on a wall)

Use magnifier to read game cards and game instructions.