Making Low Vision Simulators

Introduction
Low vision simulators can be very useful in helping family members, classroom teachers, sighted peers, and other specialists who serve the student better understand how the student with low vision may function visually. The simulators do not provide an exact duplication of the student’s visual impairment, but they do demonstrate some of the problems a student with low vision may encounter. The simulators can also demonstrate the functionality of a student’s vision. You will be responsible for constructing three types of vision simulators: field loss, media opacity, and visual acuity problems.

Visual Field Loss: Retinitis Pigmentosa or Glaucoma
This simulator will help to demonstrate “tunnel vision”, or a peripheral field loss in one eye. To construct the simulator:

1. Purchase safety goggles from a hardware store.
2. Make sure the safety glasses have dark opaque sides to block out the light.
3. For one eye, use opaque tape or masking tape and cover one lens, except for a pinhole.
4. An alternative way to create this simulator is to hot glue an empty toilet paper role tube onto one of the lenses, while covering the other lens with opaque or masking tape.
Media Opacity: Cataracts, Corneal Opacities

1. Purchase safety goggles from a hardware store or use inexpensive children’s sunglasses.
2. If using the sunglasses, pop out the darkened lenses.
3. Purchase cheese cloth, loosely woven), or gauze.
4. Tape layers of cheese cloth or gauze over the goggles or glasses until vision is impaired, but still functional.
5. You should be able to see people and objects in your environment.

Visual Acuity Problems: Myopia
This method simulates a visual acuity of approximately 20/200, which is legal blindness.

1. Purchase +3 reading glasses from a drugstore or grocery store.

Using the Simulators
Try using these simulators in a variety of environments:

- Reading street signs or menus from a distance
- Reading a newspaper or book
- Moving through a dimly lit area
- Walking up and down stairs in bright sunlight
- Walking in an area with a lot of shadows and change in lighting
- Attempting to find a house or business address or a specific landmark
The information provided is taken from a handout developed by Wendy Scheffers (1996), Orientation & Mobility Instructor, San Francisco State University.