

**Module: Visual Conditions and Functional Vision:  
 Early Intervention Issues**

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**Session 1: Working With Families and  
 Eye Care Professionals**

**Handout E: How to Make Homemade Vision Simulators**

Rosenblum, L.P. (2003). *How to make homemade vision simulators*. Chapel Hill, NC: Early Intervention Training Center for Infants and Toddlers With Visual Impairments, FPG Child Development Institute, UNC-CH.

**Directions**

To make the posterboard or cardboard masks, follow the directions below.

1. On a piece of posterboard or heavy cardboard, trace around a pair of glasses (adult for adult mask, child for child-sized mask) to get the basic shape. Draw one for each mask desired.
2. Use a paper punch to put the hole in each side for an elastic string.
3. For each mask, cut an elastic string at least one foot long. Tie each end to the holes.
4. Make sure each mask slides on and off easily and that it is tight enough to stay on.
5. Directions for creating visual simulators with goggles or posterboard masks are provided below.

<b>Acuity</b>	<b>Goggles</b>	<b>Posterboard/Cardboard Masks</b>
<b>Totally Blind</b>	Paint entire lens black.	Leave as is.
<b>Light Perception</b>	Cut pieces of translucent plastic to fit over and cover entire lens.	Cut large hole in front of each eye; cover hole with piece of translucent plastic.
<b>Gross Color/Form</b>	Cover lens with layers of clear tape or glue until you can only see shadowy forms of objects/furniture and gross color (if using glue, let dry between layers).	Cut holes as described above. Cover with layers of tape as described under goggles.
<b>Specific Acuities (e.g., 20/100 or 20/200)</b>	Put acuity chart 20 feet away. If, for example, you want a 20/200 simulator, cover lens with layers of glue or tape until 20/200 is the only clear figure. Follow the same procedure for other acuities.	Cut holes as described above. Cover with layers of clear tape as described for goggles. Follow the same procedure for other acuities.

<b>Field Loss</b>	<b>Goggles</b>	<b>Posterboard/Cardboard Masks</b>
<b>Tunnel Vision</b>	Paint entire lens black except for a tiny spot in the middle of each lens for looking through, or cut pieces of black posterboard to fit and tape on lenses and use pin as described for masks (see right).	Start with total mask; use a pin to poke a tiny hole in middle of each side, or use paper punch to make a big hole.
<b>Other</b>	Use paint or black posterboard to block out vision in any area of both lenses to create various field losses.	Start with total mask; obtain field loss as described under goggles by cutting out areas that correspond with the open areas on the diagrams.
<b>Acuity and Field Loss</b>	Start with any field loss chosen; cover lenses with glue or tape to get the desired acuity (e.g., light perception, form, 20/200).	Start with any field loss chosen; cover holes to get desired acuity level according to directions in the above chart.

Morgan, E. (1995). Vision: Vision information. In *Project VIISA: Resources for family centered intervention for infants, toddlers, and preschoolers who are visually impaired* (Vol. 2, 2nd ed., pp. 908-911). Logan, UT: Utah State University, Ski Hi Institute.