**Station #5 Vision Impairment**

Only 6% of people who are blind in the United States are under 24 years old. Many people in this group were born blind or were blinded when they were very young. They had to learn about the world through their other senses. People who become blind as adults have visual memories that help them understand the world. Blindness is more common in our older population. About 80% of people who are blind do not learn Braille because they lose their vision late in life. Braille is very difficult to read and write.

There are many people who are partially sighted or have a type of vision problem. A person is considered legally blind when she/he has less than 20/200 vision after correction. Many blind people do see some shapes, color or light. Some see well enough to read large print.

There are many causes of blindness. One out of every six blind people has lost his/her sight through accident. This is an especially common cause in young people. Other major causes of blindness are diabetes, cataracts, and glaucoma.

**Degree of Vision Loss**

* Low vision: The corrected vision is lower than normal, but some significant vision remains. They can read large print and see things held very close to their face.
* Functional blindness: This ranges from being totally blind to having some light perception. The available vision is not reliable and other senses must be used to function on a daily basis.

**Types of Vision Loss**

* Central vision loss: This is when you cannot see what is directly in front, but can only see what is at edge of the field of vision.
* Tunnel vision: This is when you can only see directly in front. Vision appears as if you are looking through a long tube.
* Cloudy vision: Images will appear as through a fog. The person will not see detail and will have difficulty seeing objects or people in the distance.
* Distorted or blurred vision: Images appear fuzzy and blurred. The person has difficulty identifying detail. Reading is difficult.

**Assisted Methods of Daily Living**

* Sighted guide: The person who is blind grasps the sighted guide's arm a little above the elbow and the guide assists in normal ambulation.
* Guide dog: A guide dog (or Leader Dog) provides "eyes" and offers more independence to people who are visually impaired. Each dog receives up to six months of training, which starts at one to two years of age. A guide dog is a working animal. Do not speak to or pet the dog to avoid distracting the dog.

* White cane: The white cane allows a person who is blind to maneuver more easily. The person who is blind taps the ground in front of him/her feeling for obstacles or where to step up or down. The sound that the cane makes as it is tapped also gives information to the person who is blind. Carpet, metal, concrete, and wood all sound differently when taped. The echo of the sound also provides information. Prescription canes are made to the exact length needed. Only a person who is blind can use a white cane.

**Activities for the Vision Impairment Station**

**Learn About Braille – Station #5**

1. Candy dot activity: Braille is a system of one to six raised dots, arranged in an area called a Braille cell. There is one cell for each letter, number sign, punctuation mark, or capital letter. Braille is read by moving your fingertips along a line of raised dots from left to right.

Each student can make their initials in Braille out of candy dots. Refer to the Braille alphabet sheets. Fold the candy dot paper in half, allowing two candy rows on each side of the fold. Ask each student to remove the candy dots where the letter indicates white circles and leave the candy dots on the black circles. They can eat the removed candy dots. It is a good idea to have a wastebasket nearby for this activity.

1. Braille writer: A six-key, manually operated machine that allows a person to type in Braille. Braille is a raised dot pattern that can represent either a letter, number, or punctuation mark. Refer to the numbers on the Braille alphabet sheet for the correct finger placements. Push all the corresponding numbered Braille Writer keys down at the same time to form each Braille cell. Students may use the Braille Writer to type their full name.
2. \*Slate and stylus: A slate is a frame that holds Braille paper that can be embossed with Braille dots. The stylus is used to make the Braille dots by pressing in the paper forming Braille cells. The wood or plastic eraser presses the dots flat again.

**Activities for the Vision Impairment Station (cont.)**

1. \*Peg slate: A device that is used by beginners to practice making and reading Braille letters. It helps a person who is blind develop their fingertip sensitivity.

\*Students may use the slate, stylus and peg slate to create words. When using the slate, stylus, and the peg slate, words must be made from right to left and the letters must be pressed in the mirror image of the Braille cell configuration on the Braille alphabet sheets. This way, when the paper is turned over to feel the raised cells, the Braille word is correct to the touch. Example: Create the word “cat” by pushing in the mirror image of the letters “t", "a" and "c”. Then turn the slate over and read “cat" in the correctly spelled order. Helpful hint: Hold the Braille alphabet sheet backward and up to a light. This will be the mirror image of the cell. Then follow the display card for dark and white circles.

1. Abacus: The abacus is based on the decimal system. It is used to solve simple math problems. Each bead below the middle bar has a value of 1 unit. Each bead above the middle bar has a value of 5 units. The beads in the column farthest to the right represent the ones place. The beads in the column second to the right represent the tens place and so on. Move the beads to the middle bar to indicate the correct quantity for each place value. The person who is blind feels along the middle bar to determine the number.
2. Notice the examples of Braille playing cards, books, ruler, greeting card, Weekly Reader, calendar, etc. How are they different from the ones you use?
3. Script letter board: A person who is blind must feel how handwriting is formed. Have the student close their eyes and feel the indented letters. Please do not write on these demonstration boards. They are very difficult to clean.
4. Analog clock: This clock displays the time in Braille and in raised large print. Notice that the hands feel differently. A student who is blind uses this style of clock to learn how to tell time.

**Activities for the Vision Impairment Station (cont.)**

**Optional**

There is a display board for this impairment station that offers more information. Encourage the students to look at the display board if time allows.