

Seeing Is Believing

Ages 7 and older.

Have you ever walked in the dark and bumped into something? Some people have an eye disease called glaucoma that causes them to see only straight ahead. They can't see what most people see out of the corners of their eyes, so it's sometimes difficult not to bump into things. In this activity, you will learn about how people with glaucoma see. Percy Julian helped make an eye medicine for people with glaucoma.

YOU WILL NEED

- two 3-oz opaque paper cups for each person
- sharpened pencil

Note: Only one pair of partners should be in motion at a time.

WHAT TO DO

1. Find a partner. Read all of the directions before you begin.
2. Turn your cups upside down. Use your pencil to poke a hole in the middle of the bottom of each of the cups. Put the pencil all the way through the hole and pull it out the other side (see illustration).



3. Decide who will place the cups over his or her eyes first. Without wearing the cups, walk with your partner around the table and back to your seat.
4. Now, hold both cups up to your eyes, placing the rim of the cups around your eyes, so that you can see only through the holes in the cups. With your partner as a guide, carefully walk around the table and back to your seat.



5. Switch roles so your partner does steps #3 and #4 above.

Questions:

- What was it like wearing the cups over your eyes?
- What was different about seeing only through the center hole in the cups and not seeing out of the corner of your eyes?
- What sort of activities might be more difficult for you to do if you couldn't see out of the corner of your eyes?
- What did you do while wearing the cups to keep from bumping into things?
- Some people with glaucoma can see well after taking the eye medicine Percy Julian helped to discover. How might their lives change because of the eye medicine?

Extension: Try walking around the table with only one eye covered by the cup. Does it look or feel different?
Note: This activity can be adapted for younger kids using adults as the helper.

LEARNING MORE

Great Black Heroes: Five Brilliant Scientists

by Linda Jones and Ron Garnett (Illustrator).
Scholastic, Cartwheel Books, 2000.
Presents the life and work of Percy Lavon Julian, George Washington Carver, Ernest Everett Just, Shirley Ann Jackson, and Susan McKinley Stewart.

The Magic School Bus Explores the Senses

by Joanna Cole and Bruce Degen.
Scholastic, 2001.
Allows children to explore the senses by traveling in a school bus through an eye and ear.

Neuroscience for Kids: The Eye
<http://staff.washington.edu/chudler/bigeye.html>
Explains vision and has a diagram of the eye as well as a crossword puzzle and related games.

Percy Julian and the Eye



Percy Julian became a chemistry professor and a research scientist. He succeeded in synthesizing a drug named physostigmine (fie so STIG meen), which is used to treat glaucoma, a disease that can lead to blindness.