



BUILDING A MODEL OF THE HUMAN EYE

HOMESCHOOL SCIENCE LAB SHEET



In this experiment, you will build a model of the human eye using household materials. You will see how light enters the eye and focuses on the back, just like a real eye!

NAME: _____

DATE: _____

BACKGROUND

The human eye works like a camera. Light enters through the clear front part (cornea) and passes through the pupil. The lens focuses the light onto the back of the eye (retina). The brain then interprets the signals to help us see.

MATERIALS

- Clear round plastic bottle (500 mL or similar)
- Small clear cup or plastic portion cup
- Water
- Plastic wrap
- Rubber band
- Black construction paper or marker
- White paper
- Flashlight (or natural light from a window)
- Scissors (adult help recommended)
- Tape

PROCEDURE

1. Remove the label from the plastic bottle and rinse it out.
2. Cut a large rectangular hole in the side of the bottle. This will be the opening to look into.
3. Fill the bottle almost completely with water.
4. Place the small clear cup over the mouth of the bottle (outside). Secure it tightly with plastic wrap and a rubber band. This is your lens.
5. Cover the inside of the back of the bottle with black construction paper or marker to block extra light.
6. Tape a piece of white paper inside the back end of the bottle. This will be your retina (screen).
7. Turn out the lights and use a flashlight to shine light through the lens (cup) into the bottle.
8. Look through the side opening and observe the image on the white paper at the back.

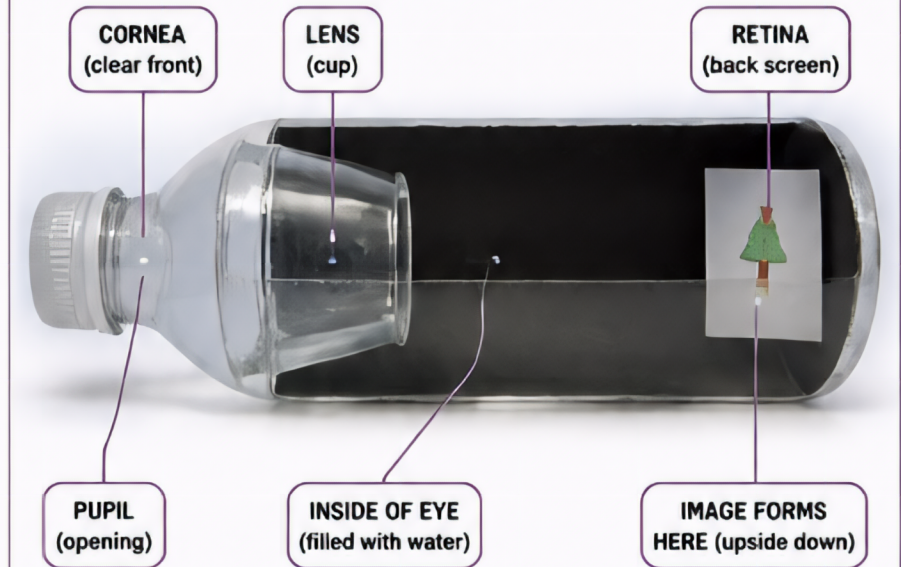
THINK & EXPLAIN

- How does your model show how the human eye works?

- Why is the image upside down on the retina in your model?

- What part of the model represents the cornea? The lens? The retina? The pupil?

THE MODEL YOU WILL BUILD



OBSERVE & RECORD

1. What do you see on the white paper (retina)?

2. Is the image right-side up or upside down?

3. What happens if you move the flashlight closer or farther away?

4. What happens if you move the lens (cup) in or out a little (if possible)?

FUN FACT!



Your eye's lens changes shape to help focus on near and far objects.