



Curiosity Guide #201

Vision

Accompanies Curious Crew, Season 2, Episode 1 (#201)

Afterimage and Vision Persistence

Investigation #8

Description

See what happens when you challenge your eyes in two different ways.

Materials

- Picture of the fish and bowl afterimage illusion from the Internet
- Wrapping paper tube or PVC tube, 3 inches in diameter and 2 $\frac{1}{2}$ feet long
- Cardboard or paper
- Pencil
- Tape
- Scissors
- Cloth

Procedure 1: Learning about Afterimage

- 1) Search "fish and bowl afterimage" on the Internet. Locate the variation that has a blue fish with yellow stripes and a simple bowl. Look at or print a copy of the picture.
- 2) Stare at the yellow stripe in the center of the fish while counting to 20.
- 3) Don't move your head. Now look at the center of the bowl and blink once. Do you see the shape of the fish in the bowl? Does it have a color?

My Results

Procedure 2: Learning about Vision Persistence

- 1) Trace a circle from one end of the tube on a piece of paper or cardboard.
- 2) Cut out the circle. Cut the circle in half to make two semi-circles.
- 3) Tape the semi-circles to the end of the tube. Leave a one-eighth inch gap or slit between the two semi-circles. Hint: Try trimming the straight edge of each semi-circle to obtain a gap.
- 4) Tape across the top and bottom of the semi-circles. The slit should be about 1 inch long and one-eighth inch wide when finished.
- 5) Close one eye. Hold the tube up to the open eye.
- 6) Block out the light coming in the tube near your face with your hand or a soft cloth.
- 7) Look through the tube. The image is very narrow.
- 8) Slowly move the tube from side to side and then increase the speed.
- 9) Can you see a more detailed picture?

My Results

Explanation

Each eye is picking up a different image as they always do, and your brain is putting the images together, like it always does. However, these two images don't belong together!

Parents and Educators: use **#CuriousCrew**
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