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 ½ 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?
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!

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