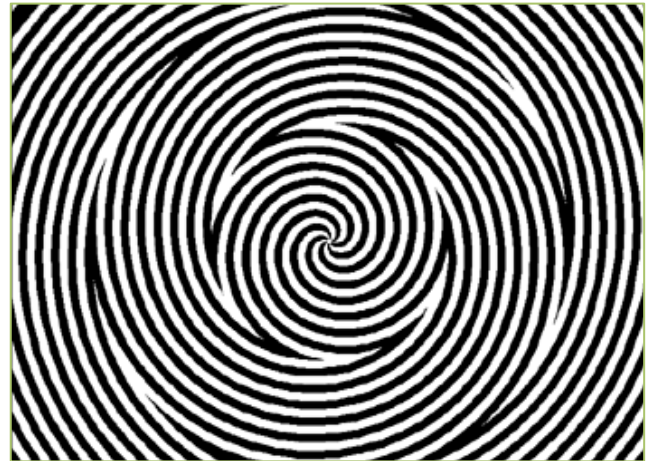Name:

Optical Illusions

What Are They?

Optical Illusions are images that trick the eye by making things appear differently from how they truly are. They do this by using colour, light, and colours to create misleading patters that trick our brains.

Try staring at the picture on the right for 1 minute, then stare at your hand. Try looking at other things around you. What do you notice?

Colour Blindness

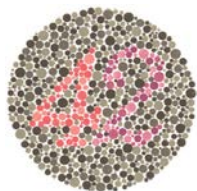There are three main types of colour blindness. Can you match the name to the photo?

Deuteranopia: The reds are all gone, leaving images rather grayish. The purple and greens are changed as well.

Tritanopia: The yellow in the image turns a light pink, and orange is gone. The blue in the sky has changed, as have the reds.
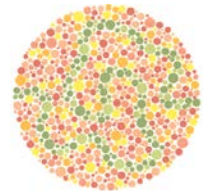
Protanopia: Similar to Deuteranopia, except the reds appear a darker shade of gray.

<u>**Original**</u>   _____   _____   _____

Testing for Colour Blindness:

Only one of deuteranopia and protanopia can see each of the numbers presented. Those with normal colour vision see a 42, however the two appears darker. Who can see the 4?

Who can see the 2?

Those with normal colour vision should see the green line, but most people with any other form cannot trace the correct line.

Weird Wonder

Materials:
- Pencil
- Ruler
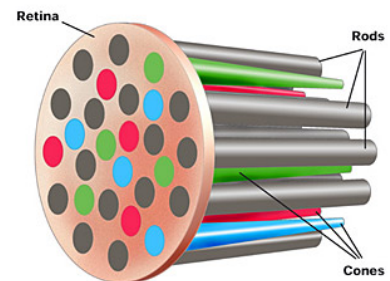- 2 Sheets of White Paper
- Yellow, Green, and Black Pens
- Timer

Instructions:

1. Draw a 15cm square on one sheet of paper. Add a 2.5cm-thick yellow border around the square.	2. Colour the area inside the border green. Add a black dot in the centre of a square.
3. Find a well-lit area. Hold the paper up and stare at the black dot for about 1 minute without blinking.	4. When the time is up, look at the blank white sheet. What do you see?

Talk About It:

1. Describe what you saw on the white sheet:

2. What are the three primary colours that make white light?

3. Why do you think your eyes mixed them up?

Understanding the Eye

Label the following diagram with the missing parts: **Lens, Iris, Cornea, Pupil, Retina, Blood Vessels,** and **Optic Nerve.**