

Name:

Looking at Light

Humans & Light

Look at the image on the right.

How many sources of artificial light do you see?

How many real sources of light do you see?

If the power went out, how many people would have to stop what they are doing?

What objects give off both light and heat?



Let's Build a Kaleidoscope!

Materials:

- 3 Acrylic mirror strips (2cmx23cm)
- Roll of colourful electrical tape
- Soft steel binding wire
- Marble



Instructions:

1. Lay the 3 mirror strips face-down in a row, slightly spaced. Put a strip of electrical tape across the back at the top and bottom.



2. Fold the mirrors into a triangular prism with the shiny side facing inward, and apply tape to the sharp edges outside.



3. Bend the wire in half and cradle the marble with it so it is held snugly. This might take some fiddling and some patience.



4. Tape the wire to the bottom of the mirror prism, trying to keep the marble covering the hole for the best effect.



Name: _____

Questions to Consider:

Describe what you see:

Why do you see repeated images and patterns?

What happens when you change the position of the marble?

How do you think adding or taking away mirrors would affect what you see through the kaleidoscope?



Fish-Eyed: Teleidoscope

Ever hear of this sort of contraption? It's called a **teleidoscope**.



Instead of seeing objects *inside* itself like a kaleidoscope does, a teleidoscope works by having a round lens at the end of a tube so that images from *outside* the apparatus are brought in and reflected.

Below is a regular fish-eye image. How do you think the repeated pattern is produced in a teleidoscope?

