



Lighting Effects



Light travels in straight lines called rays but these rays can change direction if they're reflected by things such as mirrors or water. Here are a few ideas to see the effects of this.

Make a kaleidoscope

The word kaleidoscope comes from the Greek words *kalos* meaning beautiful and *eidos* meaning form.

What do I need?

- Postcard or sheet of card of a similar size
- Tin foil
- Stiff clear plastic (try recycling a piece from some packaging)
- Scissors
- Ruler
- Glue
- Sticky tape
- Tracing paper (greaseproof paper or baking paper will do)
- Colouring pens or pencils
- An adult

What do I do?

1. Fold the postcard in half so that the shorter sides meet then fold in half again in the same way. Open it out.
2. Cut a piece of clear plastic the same size and lay on top of postcard.
3. Score lines on the plastic, on top of the postcard folds, using scissors and a ruler (ask an adult to help).
4. Put the plastic to one side for later.
5. Cut a piece of tin foil the same size as the postcard. Glue it to the card and smooth out as much as possible.
6. Lay the plastic on top of the foil and fold postcard into a triangular tube. You should have an overlapping piece as your postcard has been divided into four pieces. Secure this with sticky tape or glue.
7. Cut out a piece of tracing paper larger than the end of the tube. Draw patterns on it with your coloured pens or pencils.
8. Look through one end of the tube and hold the paper to the other end. Point it to the light and turn the paper round to see what happens.

What's going on?

Light shines through the tracing paper into the tube. The plastic-covered foils sides act like mirrors, reflecting the light. Each side also reflects the light that reflects from the other sides. All of these reflections creating different patterns of coloured light.

Taken from: Usborne 100 Science Experiments

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