

CREATE YOUR OWN PINHOLE CAMERA

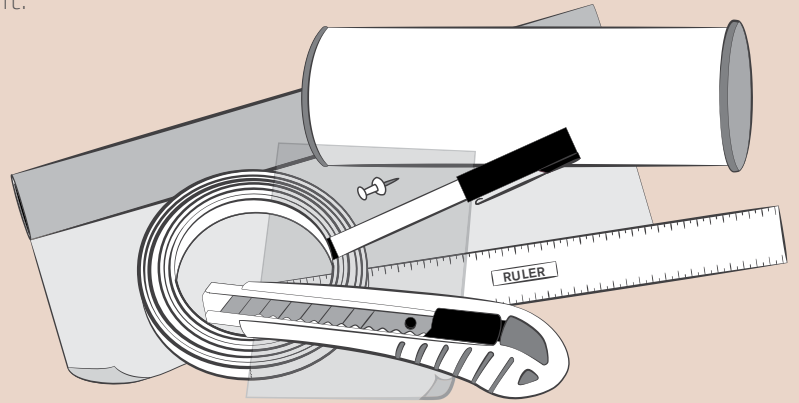
When light rays travel to our eyes, the rays go through the pupil and the lens of the eye, and produce an inverted (upside down) image on the eye's retina. The image is then turned the right way up by your brain. When you use a **pinhole camera**, the image you see projected on the paper is what your eyes see before your brain flips things upright.

MATERIALS

empty Pringles® chip can
marker
ruler
utility knife
thumbtack

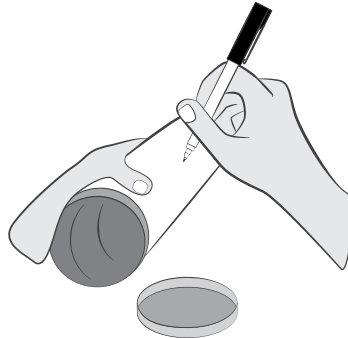
masking tape
aluminium foil
scissors
wax or tissue paper

also: a sunny day

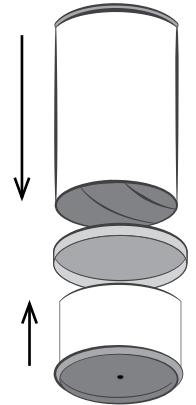


METHOD

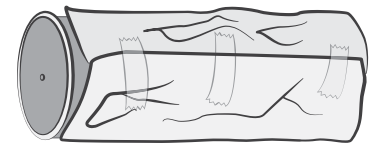
- 1 Take the plastic lid off the empty Pringles® can, wipe out the inside and remember to keep the lid.
- 2 Using the marker, draw a line all the way around the can, about 5cm from the bottom; cut along the line so the tube is in two pieces.
- 3 Make a hole in the centre of the metal base of the can using a thumbtack.
- 4 The plastic lid will be used as a translucent screen in your pinhole camera, so apply a piece of wax or tissue paper to the lid if it is clear.



- 5 Place the plastic lid onto the shorter tube and then attach the longer piece to the lid. Tape these sections together.
- 6 Wrap a piece of aluminium foil around the whole tube to keep out light. Tape one end of the foil to the tube. Wrap the foil all the way around the tube twice, then tape the loose edge of the foil closed. If you have extra foil at the top, just tuck it neatly inside the tube.



Your pinhole camera is now ready!



USING YOUR PINHOLE CAMERA

- Go outside on a sunny day. Close one eye and hold the tube up to your other eye. You want the inside of the tube to be as dark as possible so you may need to cup your hands around the opening of the tube.
- Look at your surroundings through the tube. The lid makes a screen that shows you upside-down images.
- Hold your hand below the tube and move it very slowly upward. Your hand is moving up, but you'll see its shadow move down the screen.
- You can experiment further by creating different types of pinhole cameras using a matchbox and even film. These websites will help with future experiments:
Kodak, 'How to make and use a pinhole camera': http://www.kodak.com/ek/US/en/Pinhole_Camera.htm
DIY Photography, '23 pinhole cameras that you can build at home': <http://www.diyphotography.net/23-pinhole-cameras-that-you-can-build-at-home>