



- 1. Tape the piece of foil to one end of the larger tube.
- 2. Pierce a tiny hole into the centre of the foil.
- 3. Tape the piece of tracing paper onto one end of the smaller tube.
- 4. Insert the small tube into the larger tube tracing paper end first.
- 5. In a brightly lit area place the open end of the tube to your eye and have a look at the world upside down!
- 6. The image will change if you move the tracing paper closer to or further away from the pinhole end.



- Draw around the template onto the stiff card. Cut out the circle and the slits. Make sure the size of the slits around the circle are equal and the sides are straight.
- 2. You can use the template on the next page, or draw your own.
- 3. If you draw your own, you need to draw an animation that can repeat as you spin the phenakistoscope around.
- 4. You might want to colour in your animation.
- 5. When you have finished your animation take it, your straw and paper fastener to an adult. Ask them to push the paper fastener through the middle of the piece of card and through the straw.
- 6. The holes in both should be large enough to allow the phenakistoscope to spin. Attach the piece of card (animation on the outside) to the straw.
- 7. The phenakistoscope is ready to use. Hold it up facing a mirror and spin it. As it spins watch the animation through the slits and you should see a moving image.

Phenakistoscope Template

You can use this template to make your own phenakistoscope. After, why not trying drawing your own animation? A running horse or a balloon floating away would work well.

Label the Box Camera

Box cameras were one of the earliest types of camera to be invented. Can you match the words in the box below to the correct parts of the camera in the picture?



