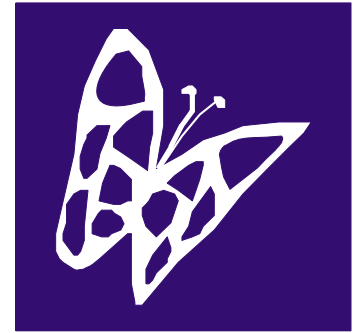


MAKE IT in Science

By Martin Roberts



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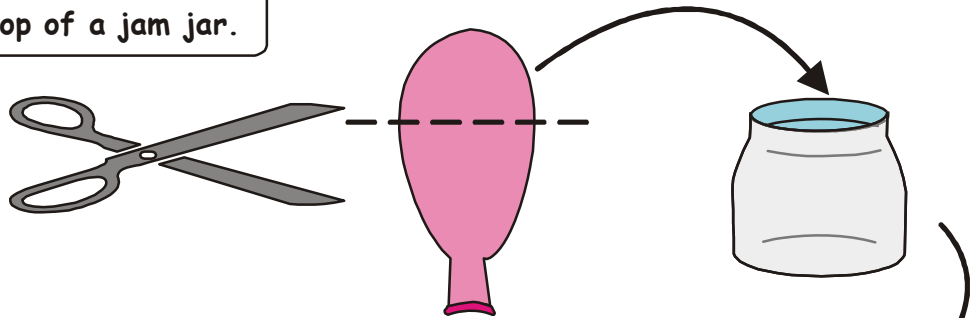
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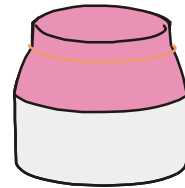
Barometer

Jam jar Straws Balloons Scissors Glue plastic/plastic Card Sticky tack

- ① Cut the top off of the balloon and secure it to the top of a jam jar.

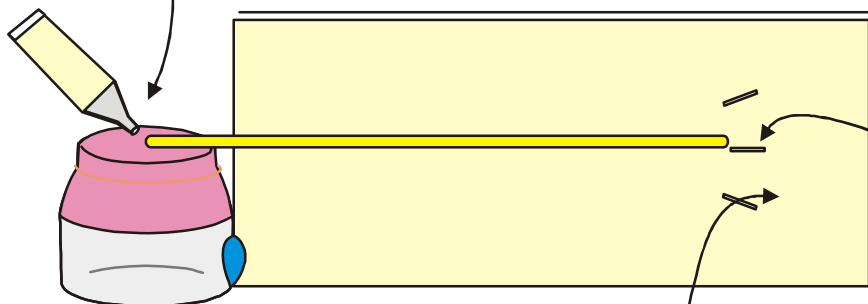


- ② Stretch tightly and seal firmly with a strong rubber band.

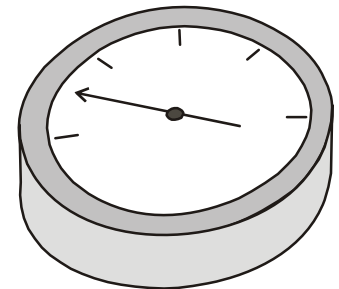


- ③ Stick a drinking straw to the rubber balloon using contact cement.

⚠ Use a well ventilated space for gluing.



- ④ Mark the initial position of straw and note the air pressure using a barometer.



- ⑤ Note the variation of height of the straw as the pressure changes from day to day.

Fossil leaf

Card Leaf Newspaper Plastic cup Spoon Plaster of Paris

①

Prepare some plaster of Paris in a plastic cup. Typical mixing instructions are shown below.

Plaster of Paris is added to water in a ratio of approximately 1:1. Stir until a creamy paste is achieved.

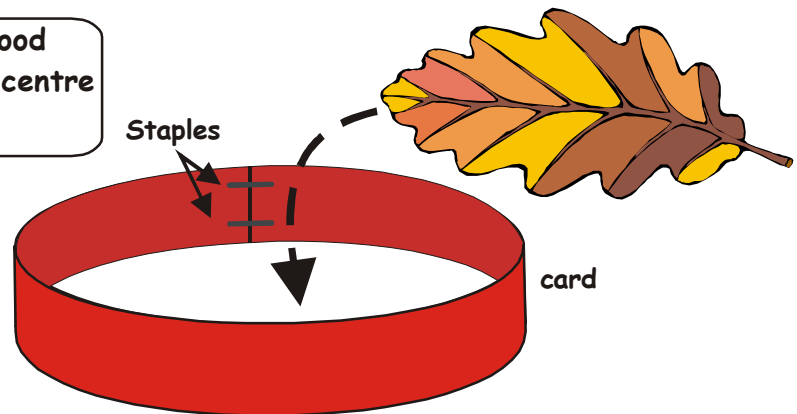


②

Roll a strip of card into a cylindrical shape to make the shallow mould into which you pour the plaster.

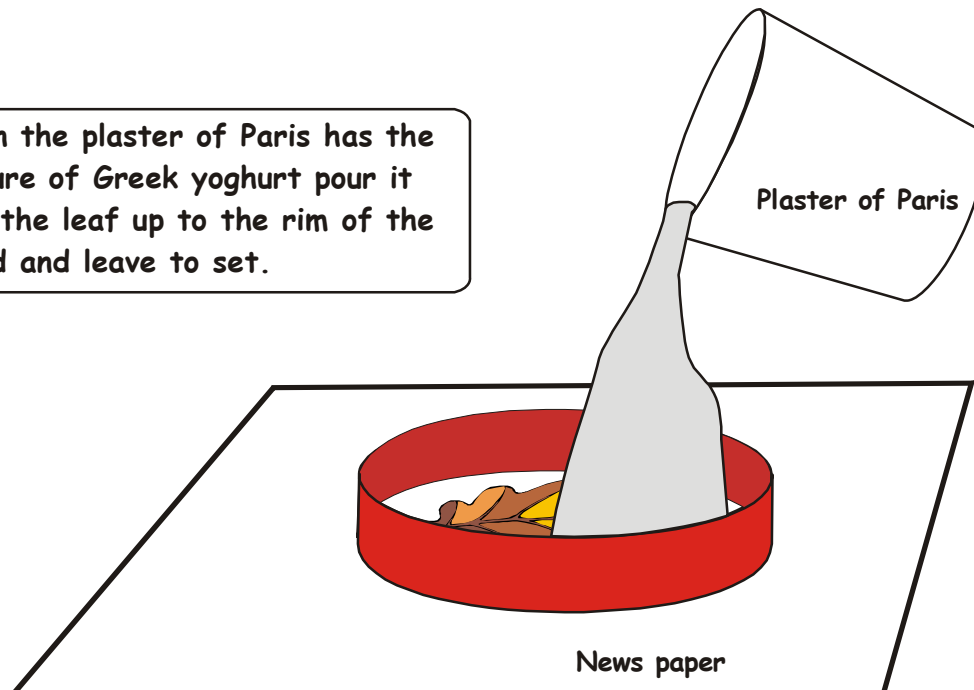
③

Find a dead leaf that is in good condition and place it in the centre of the mould.



④

When the plaster of Paris has the texture of Greek yoghurt pour it over the leaf up to the rim of the mould and leave to set.



Mini kites

Tissue paper Plastic straws duck tape Thread Glue

①

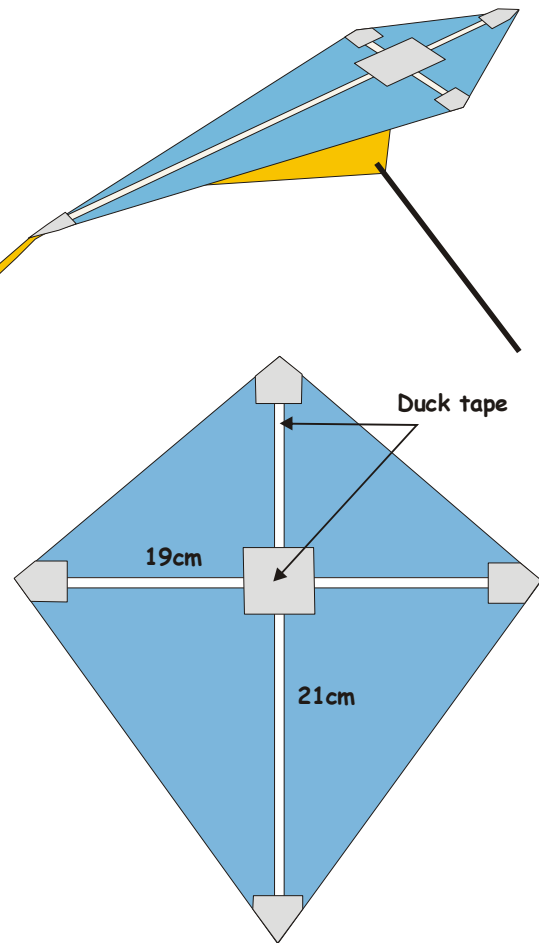
Use the diagram on the [following page](#) to make a number of card templates of the kite and keel. Try cereal packets!

Get the children to use the templates to cut out the kite shape and the keel from different coloured tissue paper.

②

Cut two straws to lengths of 21cm (vertical strut) and 19cm (horizontal strut) and glue them to the kite. Cut out the strut supports from duck tape and position at for the four corners of the kite.

Strengthen the central join between the two struts by covering with an additional section of duck tape.

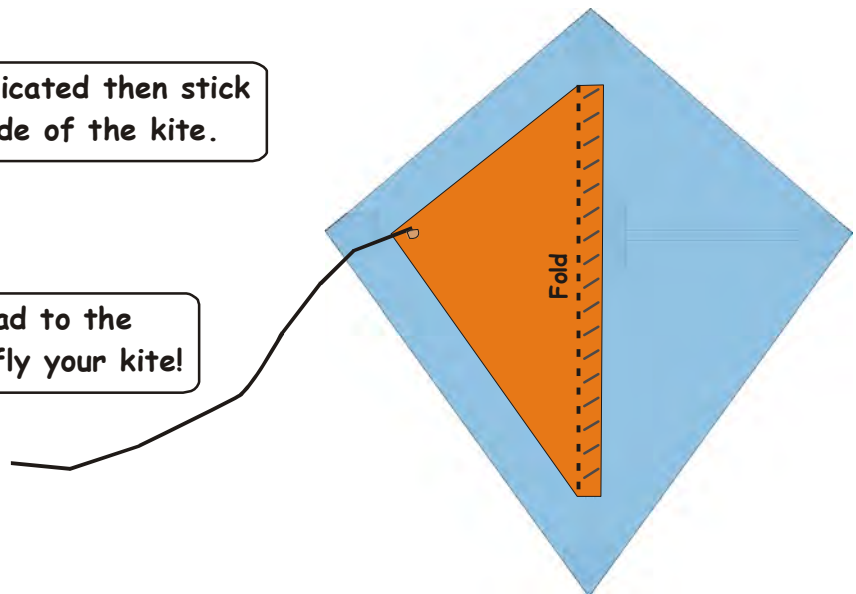


③

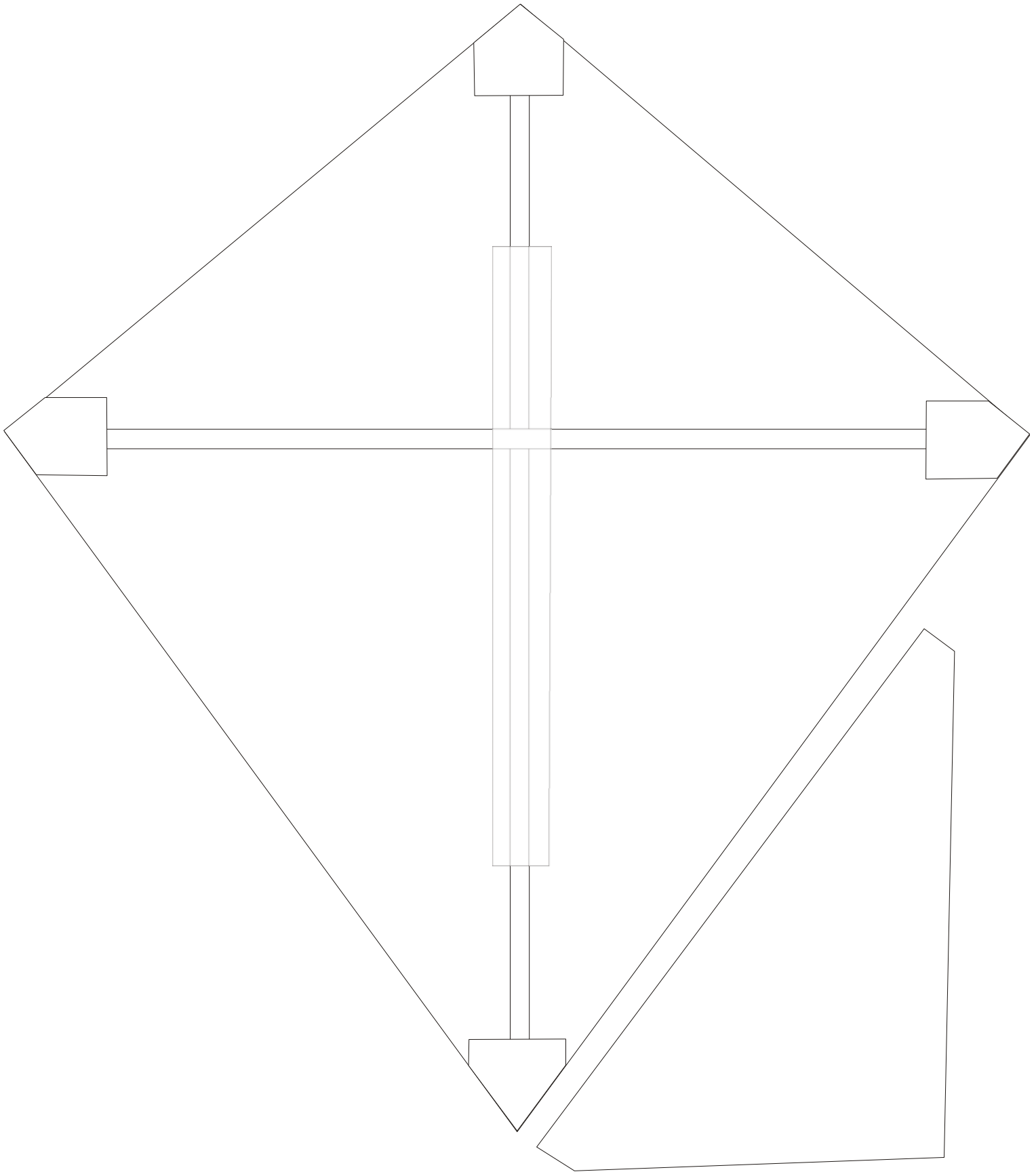
Fold the keel where indicated then stick the tab to the other side of the kite.

④

Stick some cotton thread to the tip of the keel and go fly your kite!



Mini kites

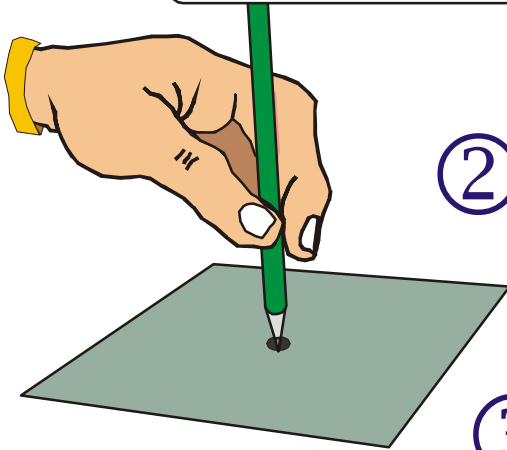
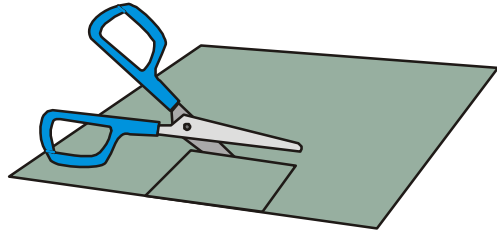


Hovercraft

Cotton reel (thin type) Stiff card (cereal packet) Scissors Glue Sharp pencil Rubber bands Felt tip pen case

①

Cut a square section of 5cm x 5cm from a stiff piece of cardboard with glossy backing (like those used for cereal packets).

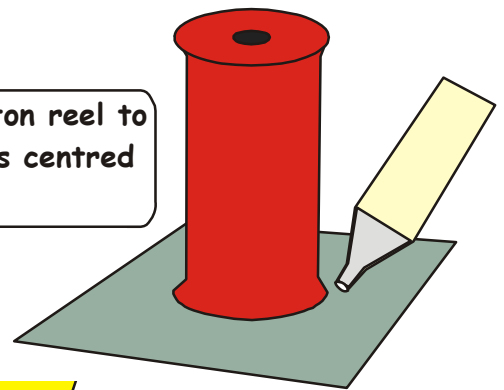


②

Use a sharp pencil to make a hole of about 4mm in diameter in the centre of the card,

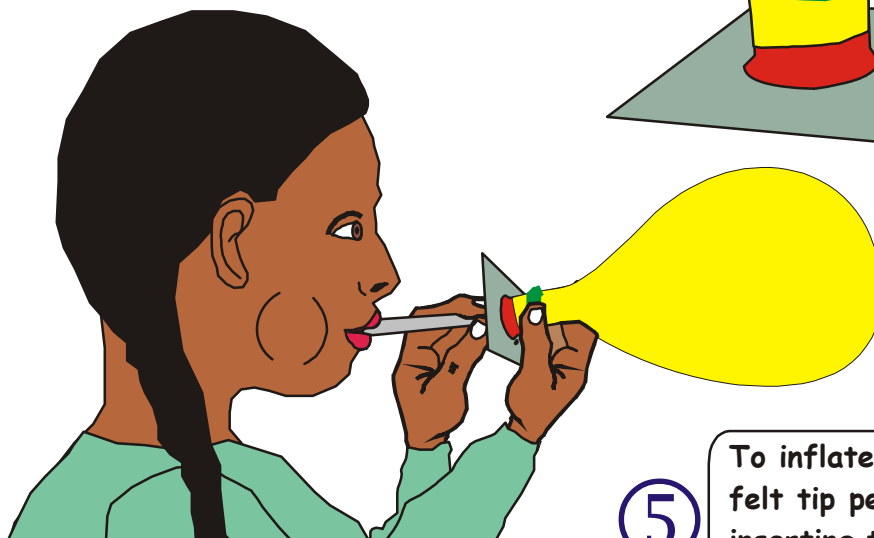
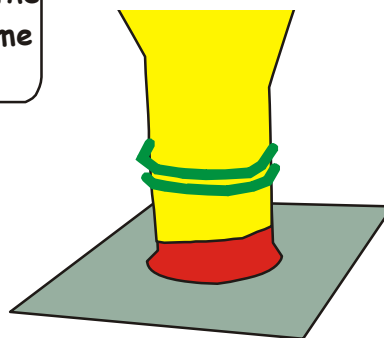
③

Stick an old cotton reel to card so that it is centred on the hole.



④

Pull the mouth of a balloon over the cotton reel and secure it with some elastic bands.



⑤

To inflate the balloon use an empty felt tip pen case as an adapter, inserting the pointed end into the hole at the base of the "hovercraft".

⑥

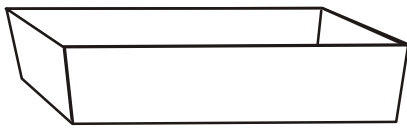
Now test out your "hovercraft" on a flat surface.

Paper mache Moon

Plastic container Paper PVA glue Hook Paintbrush and paint Old tennis ball or plastic ball

①

Find a ball (small plastic or old tennis) that is about 4 x smaller than your classroom globe. (Precise, 3.66 x smaller)



②

Screw a small hook or eyelet into the ball and secure with appropriate glue.

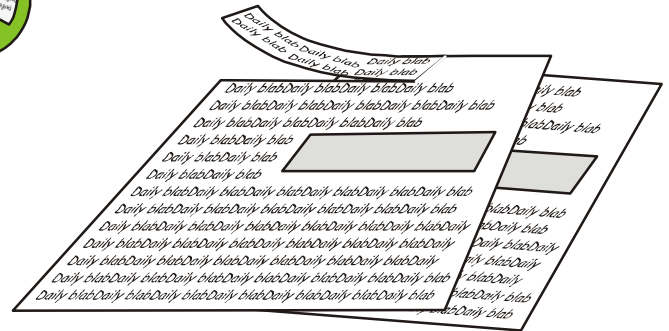
③

Make a mixture of white PVA glue and water in a large margarine tub.



④

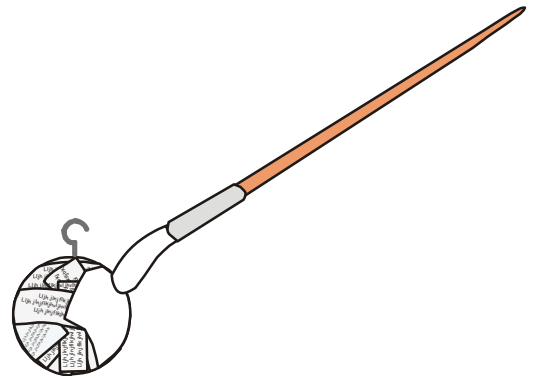
Now soak strips of paper in the mixture and stick them to the ball. Try to produce a crinkly effect on the surface to represent mountains and craters.



⑤

When the paper mache has set paint the Moon white and allow it to dry.

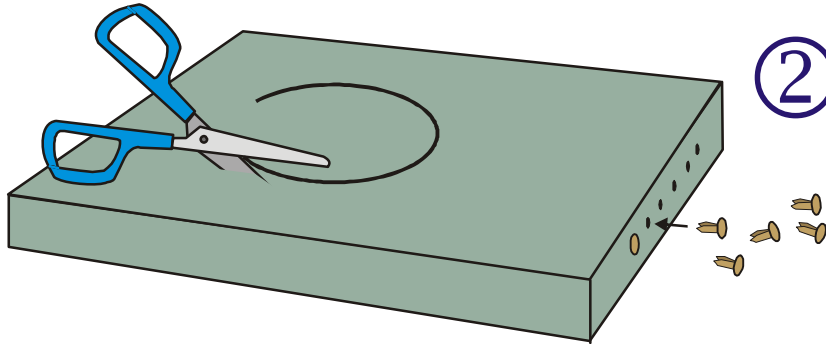
Attach a string and you are now ready to hang your Moon. (See [expt. 5E9](#))



Shoe box guitar

Print and photocopy template ([following page](#)) Shoe box Scissors Brass paper fasteners Elastic bands Glue

- ① Draw and cut out a circular hole in a shoe box lid as shown below.



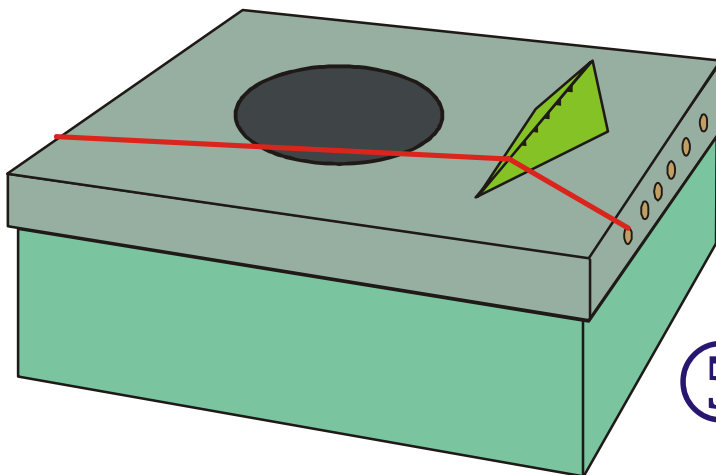
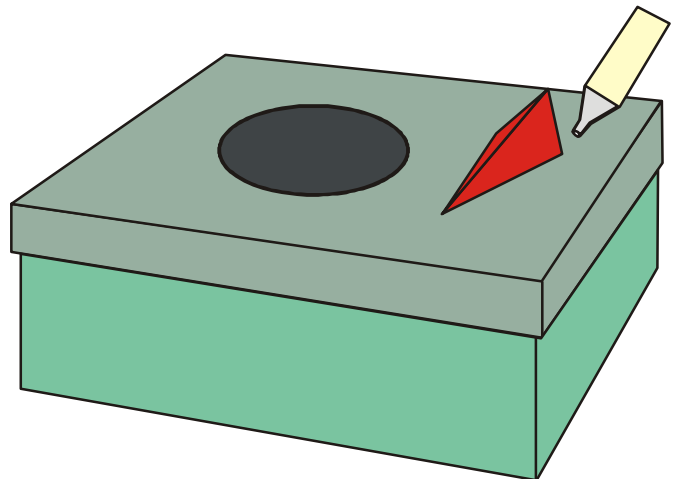
- ② Make 6 holes in the box lid then insert brass paper fasteners to hold the rubber bands in position.



Use a well ventilated area for gluing.

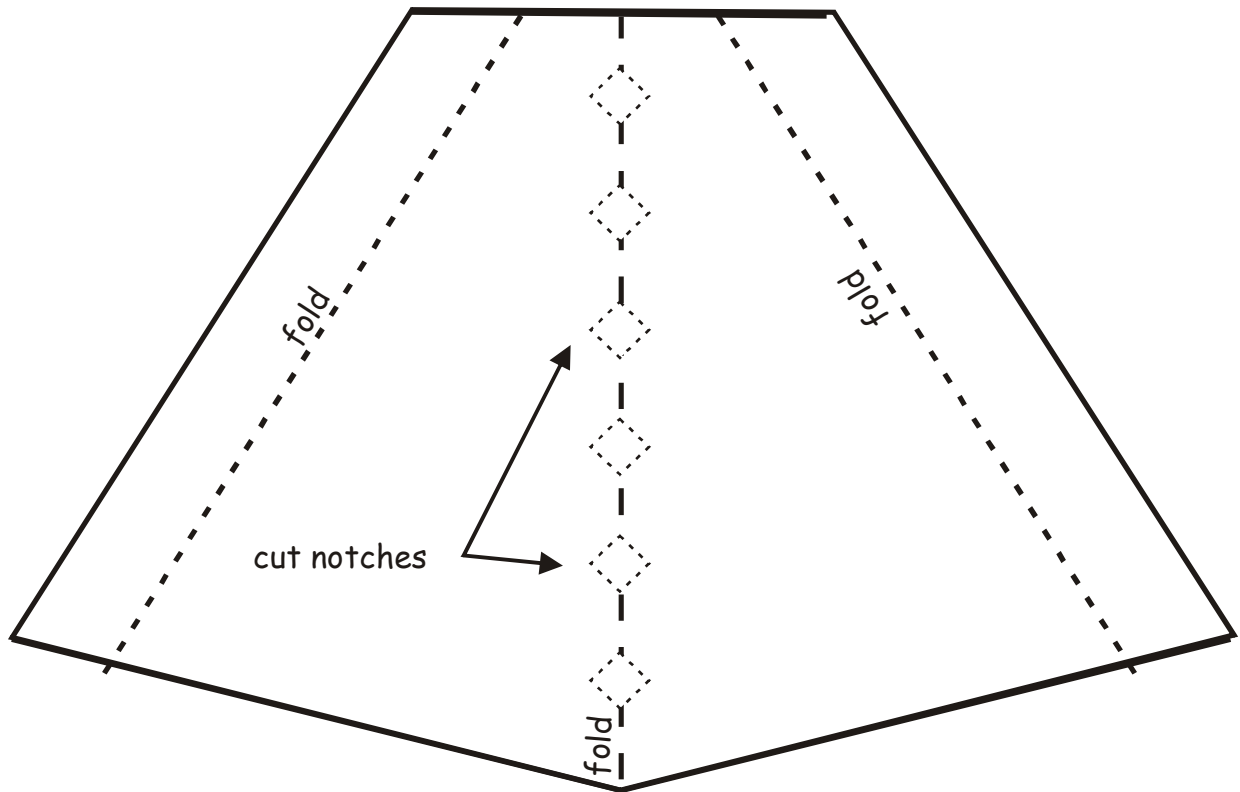
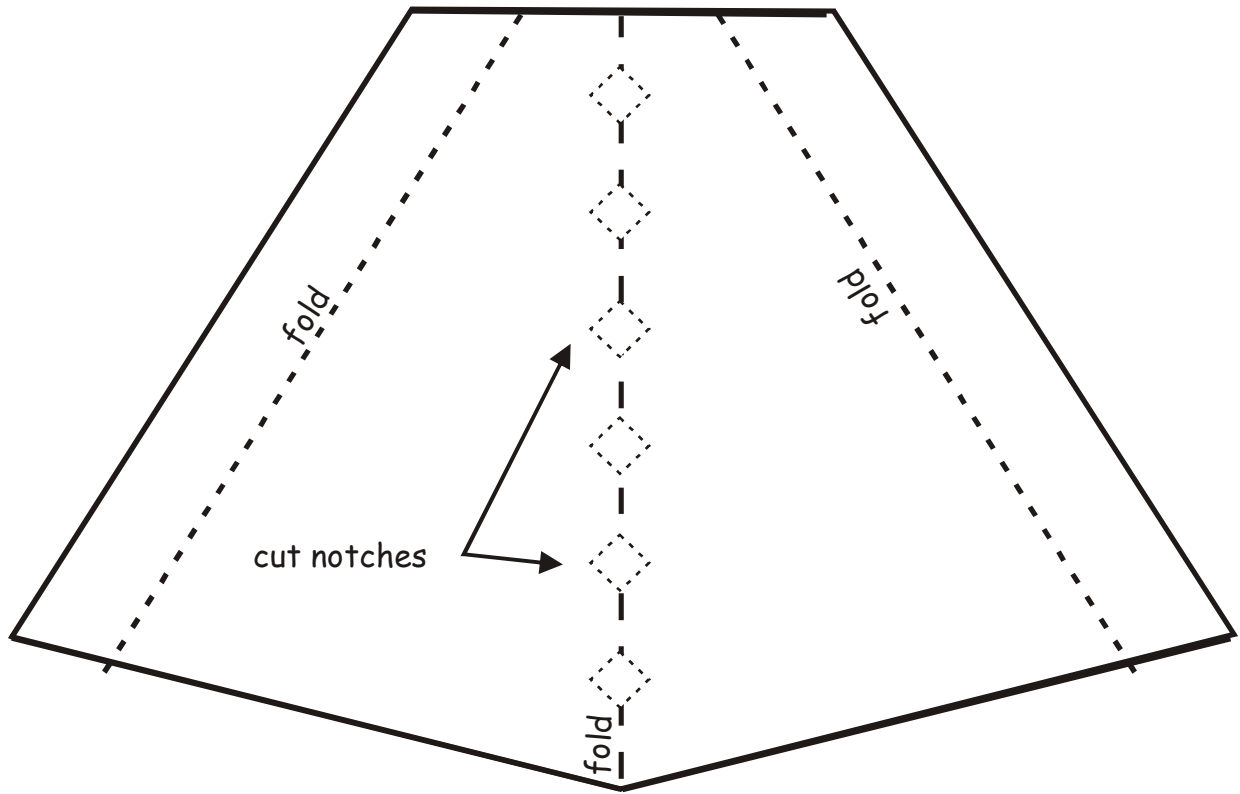
- ③ To make the bridge, stick the template ([see following page](#)) to some card (cereal packet) then cut out.

- ④ Fold the card down the middle then cut out six notches for the strings. Finally stick the bridge to the shoe box lid by folding and glueing the tabs.



- ⑤ Make your strings by cutting six rubber bands. To finish, tie the strings to the paper fasteners, positioning each in its corresponding notch on the bridge.

Shoe box guitar



Magic lantern

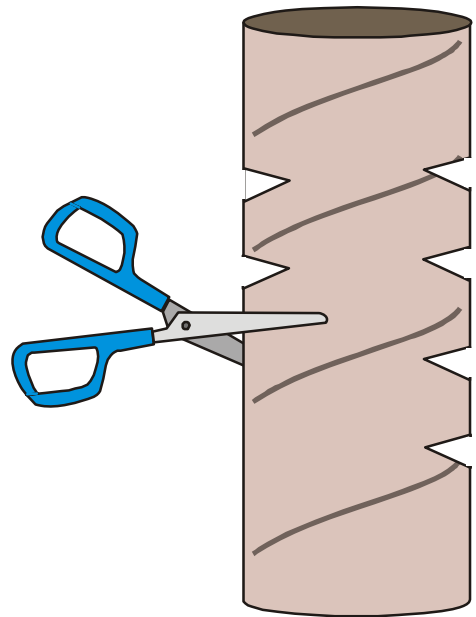
Kitchen towel roll Scissors Coloured transparent paper Rubber band Small torch

①

Flatten a long cardboard roll. The type used for kitchen cleaning towels is best.

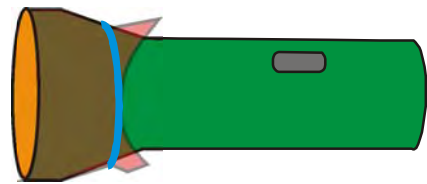
②

Cut geometrical shapes out at the edge as indicated opposite.



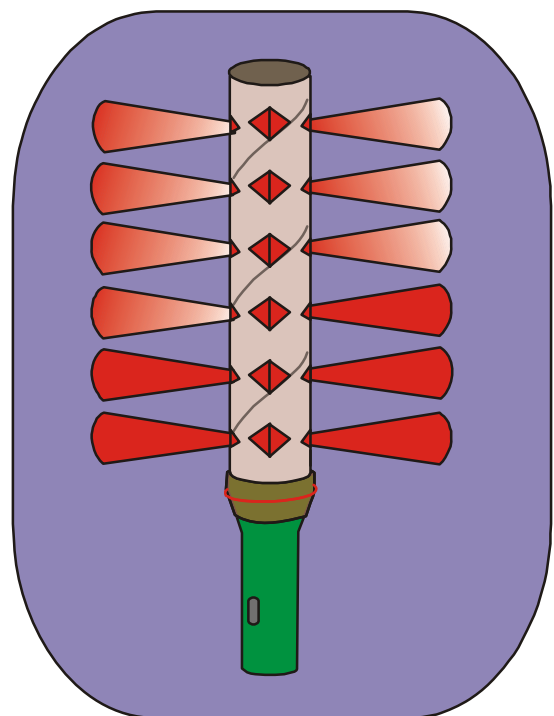
③

Hold a piece of coloured transparency paper over the end of a torch using an elastic band.



④

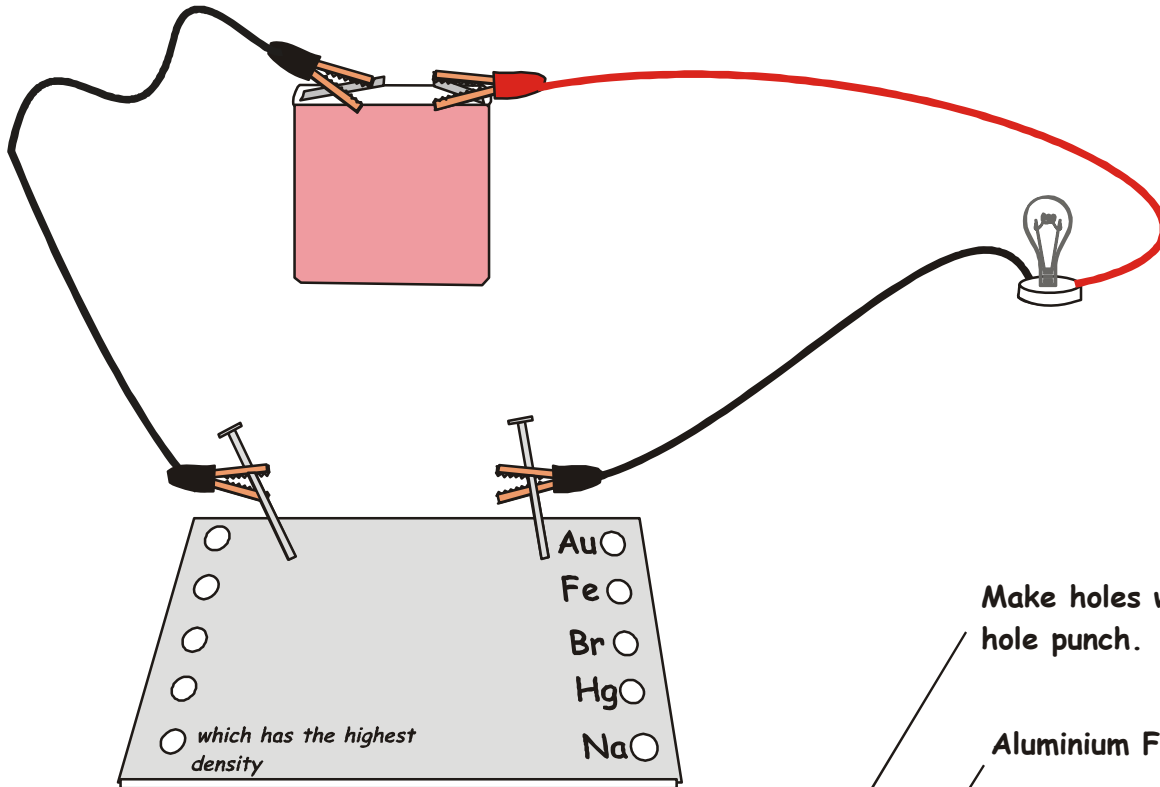
Make your magic lantern by holding the torch under the kitchen towel roll as indicated opposite.



Quiz board

6V torch light bulb and holder Cables and clips Battery 4.5V Nails Card Aluminium foil Sticky tape Hole punch

Make a quiz board as shown in the diagram below.



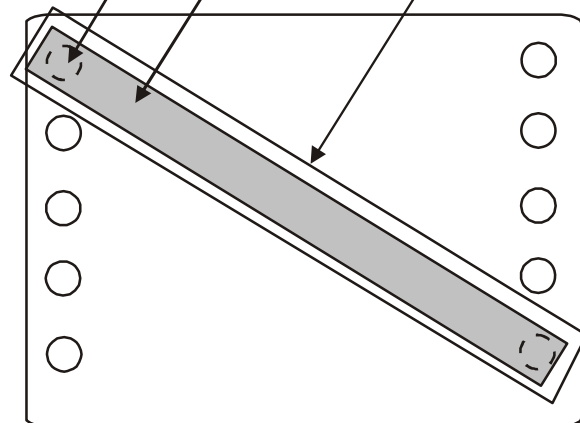
Make holes with a hole punch.

Aluminium Foil.

Use sellotape as an insulator.

- | | | | |
|-----------------------|--------------------------------|-----------|-----------------------|
| <input type="radio"/> | Which floats in water? | Au | <input type="radio"/> |
| <input type="radio"/> | Which is a non metal? | Fe | <input type="radio"/> |
| <input type="radio"/> | Which is a liquid? | C | <input type="radio"/> |
| <input type="radio"/> | Which is magnetic? | Hg | <input type="radio"/> |
| <input type="radio"/> | Which has the highest density? | Na | <input type="radio"/> |

FRONT



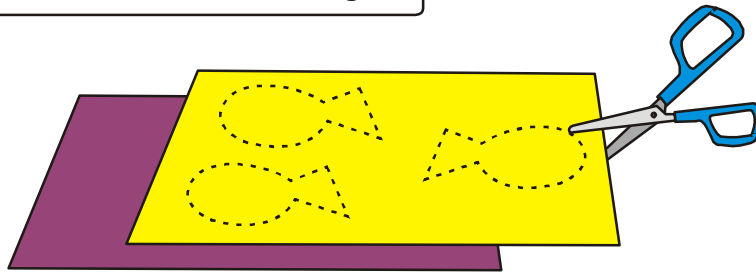
BACK

Magnetic fish

Card Scissors Paper clips Large container or washing up bowl Horseshoe magnet Thread Dowel

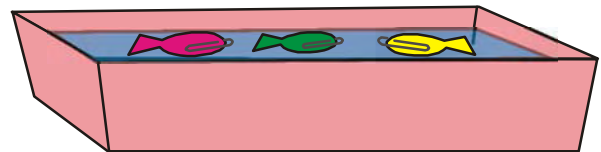
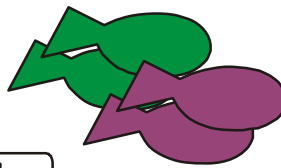
①

Make your fish by drawing shapes on coloured card and then cutting.



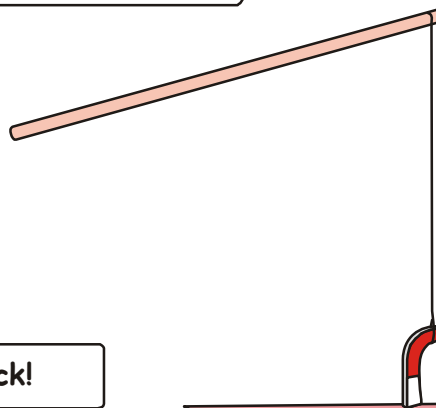
②

Attach paperclips to the card and carefully float them in a tray containing water.



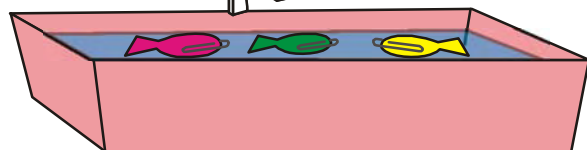
③

Make a fishing rod by attaching a small horseshoe or ring magnet to a small rod or pencil with a piece of string.

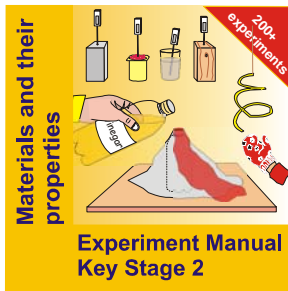


④

Go Fishing. Best of luck!



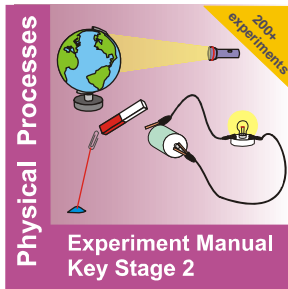
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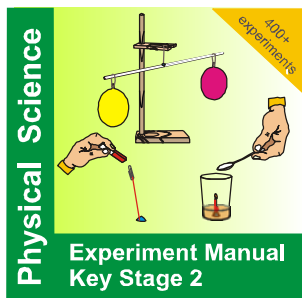
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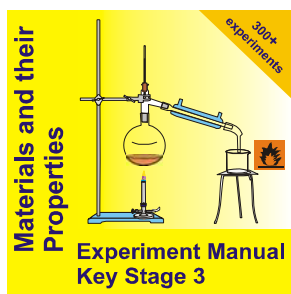


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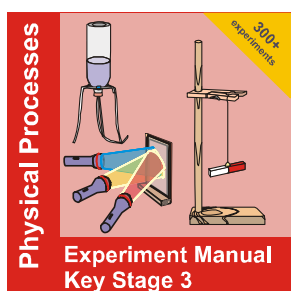
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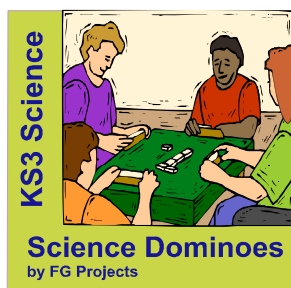
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