ENERGY

science museum

Credit: TopFoto

Build a sail-car of the future

This activity uses a simple sail to harness the energy in wind and use it to power a car.

You will need

- Sheet of stiff card
- Sheet of thick paper
- 3 bendy drinking straws
- 2 short lengths of dowel
- 4 cotton bobbins or wheels
- Glue and sticky tape
- Pair of scissors
- Copy of the sail-car template

Steps

1

Copy the template design onto a piece of card and very carefully cut it out.

2

Cut out the two pairs of holes as shown (which must be just big enough to allow a straw to slide through them). Fold the card along the dotted lines.

3

Cut off the bendy bits from two of the straws and push the remaining parts through the pairs of holes. (These straws will act as holders for the wheel axles.)

4

Take the remaining straw and glue the bendy bit to the top of the base of the car in order to form a mast. Glue a sail made from a single sheet of paper to the mast.

5

Glue one end of each of the lengths of dowel to a bobbin or wheel and leave to dry. When the glue has set, push the two dowels through the straw axle holders and glue the other bobbins or wheels in place. Once all the glue has set, you should be able to start racing your sail-car.

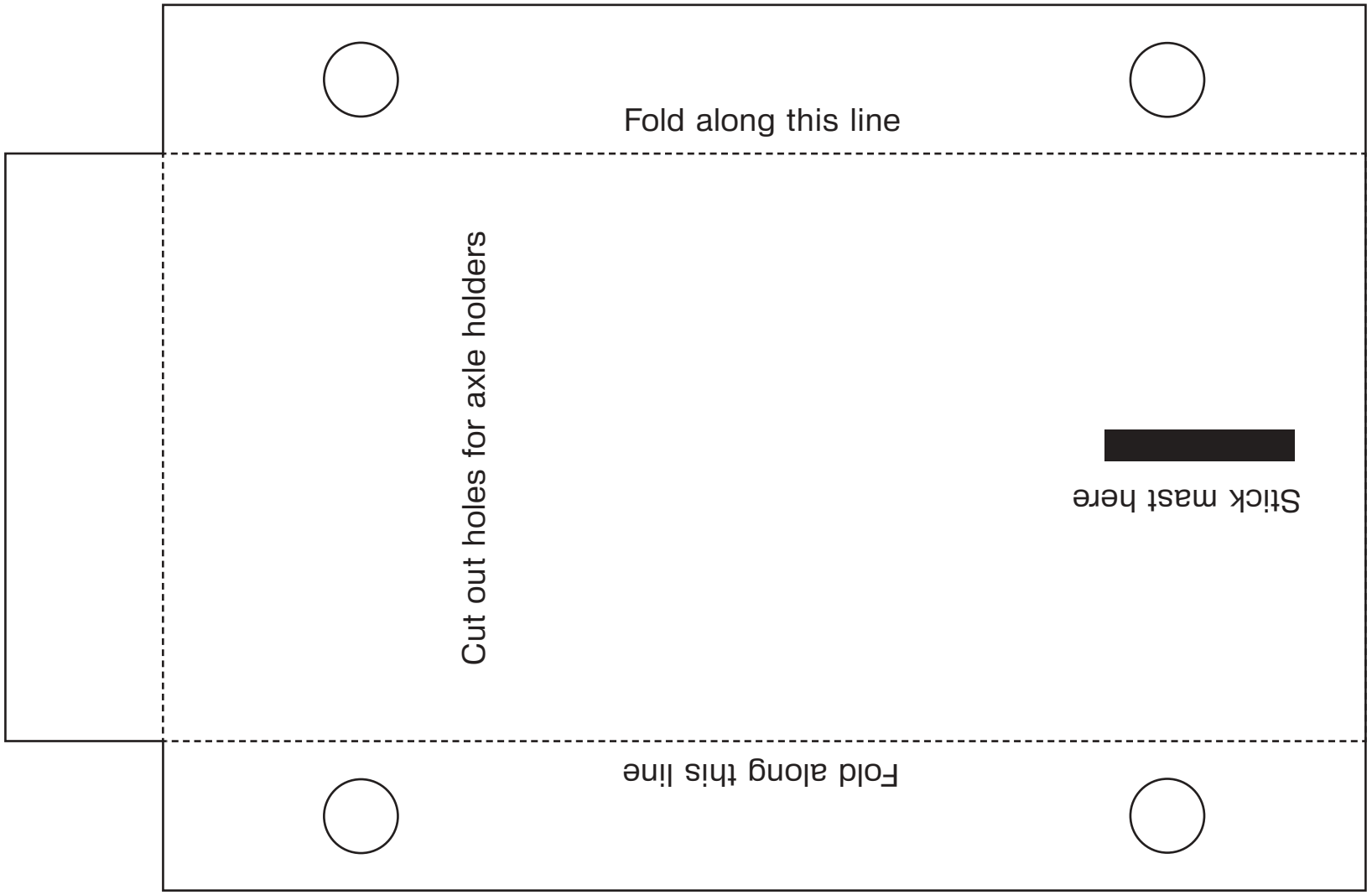
Analysis/ discussion

How might you improve on the design of the sail-car? (Clues: How are you going to steer it? What happens if you use a sail of a different shape or size?)

What changes would we have to introduce to our roads before we could start to use sail-cars? (Clues: No tunnels or sharp bends allowed. What will we do on calm days?)

Do you think that the sail-car will be a likely alternative to the conventional car when fossil fuels eventually run out?

Sail-car template



Credit: