



Activity 8.2

INVESTIGATING THE DESIGN OF TURBINE BLADES

Aim:

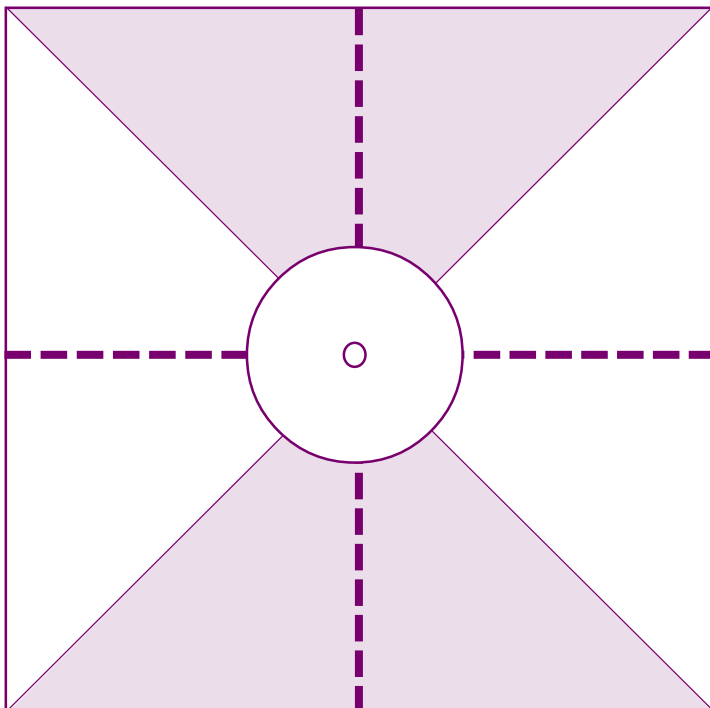
When you have completed this activity you will have made model turbine blades and described the effects of changes in their shape.

You will need:

Thin cardboard
Ruler
Pencil
Scissors
Two drawing pins
Two rubbers

Procedure:

- Cut out two pieces of thin cardboard with sides 11 cm and 15 cm. Colour as in the diagram.
- Draw guidelines on the squares, then cut along the broken lines.
- Make a small hole in the centre. Bend up the cardboard along the diagonal lines.



- Pass a drawing pin through the centre holes then push the sharp end into a rubber.
- Hold both turbine blades near a fan. Try to count the number of revolutions per 10 seconds of each turbine. Do they turn at the same speed? Does the speed of turning change when you change the amount of bend in the turbine blades?

Alternatively:

You will need:

A plastic drink bottle
Scissors

Procedure:

Cut off the bottom of a plastic drink bottle.

- Cut along the broken lines (as in the diagram) to make strips extending halfway along the bottle.
- Bend back the strips to form them into turbine blades.
- Put a peg, or your finger, into the mouth of the bottle.
- Hold the turbine blade near a fan, as in the previous activity.

