

Lesson 2 Windmill

AGES 7–9

Objectives

- To make a model by following instructions.
- To construct a model windmill and test it.
- To evaluate their work and suggest improvements.

Subject references

Design and technology

- Measure, mark out, cut and shape materials and assemble, join and combine components accurately.

(NC: KS2 2a)

- Carry out appropriate tests before making any improvements.

(NC: KS2 3b)

- Do focused practical tasks that develop a range of techniques.

(NC: KS2 5b)

Mathematics

- Measure objects, using simple measuring instruments and scales.

(NC: KS2 4c)

Geography

- Use maps at a range of scales.

(NC KS2 2c)

Resources and preparation

- Each child or group will need: a photocopy of page 38 (ideally, this should be photocopied on to thin card, but it will work with paper), a ruler, scissors, a piece of cardboard at least 24cm long from which to cut a strip, a bead with a hole large enough for a paper fastener, a paper fastener, glue.
- You may like to make a windmill before the lesson and use it perhaps with less confident learners to help them to see what they are making.
- For the starter, collect a large flat stone (about 12cm x 10cm x 1cm) and a small flat stone (about 8cm x 8cm x 1cm), and some porridge oats. These may be available in school already if someone has done Lesson 1 in Theme 1.
- You may like to visit the website www.ukmills.com in order to look at different types of windmills, the structure of windmills and discover the location of the mills around the UK. (The site also shows some waterwheels.)

Starter

- Place some porridge oats on the large flat stone and grind them up with the smaller stone. Tell or remind the children that this was the way people ground up corn to make flour for thousands of years. Explain to them that later on, about 1,300 years ago, a way of using the power of the wind was invented in order to do the grinding job. Ask the children what they think the invention was and look for an answer about windmills.
- Encourage the children to tell you what they know about windmills. They may know something about them from stories they have read or listened to. Alternatively, or additionally, you could display the first website on an interactive whiteboard and look at the many different types of windmill.
- Tell the children that they are going to make a model windmill.



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