



Windmill - KS2 Challenge Sheet

Wind-power is back in fashion! Can you make a model windmill with sails that turn? What could it be used for? Use pulleys and cogs to explore movement in order to carry out various tasks.

Educational objective

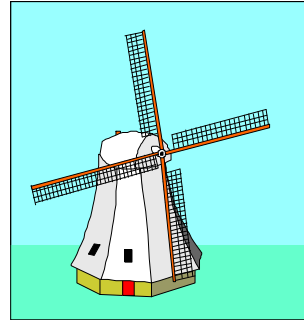
A practical project which demonstrates that forces cause both linear and rotary motion, and that pulleys and gears can be used to transfer those forces. The project may be used as an introduction to the topic, or to reinforce work already done in class.

Approach

Whole class introduction about windmills. Group activity with children working in pairs to build a model of a windmill, using K'NEX in which turning the sails causes a millstone to turn, and a hammer to go up and down, via a set of pulleys, gear wheels, a cam and a lever.

Specific skills to be developed

Manipulative, designing and making skills, social and problem solving skills.



Cross-curricular links

Science

Ideas for extension activities

Discuss where windmills are best sited, a visit to a working water wheel. Where and how is windpower used today?

Equipment we will provide:

boxes of K'NEX

K'NEX pulley wheels

large K'NEX elastic bands

Subject skills / Desirable outcomes

Structures
Mechanisms
Designing skills
Making skills
Shape, space & measure

Life skills

Innovation skills
Problem-solving skills
Team working skills
Communication skills
A 'can-do' approach