

Topic

Electrical Systems-
Doodlers.



Holy Family Halewood
Year 5 and 6 Design Technology



Learning Objectives

- To understand how motors are used in electrical products.
- To investigate an existing product to determine the factors that affect the product's form and function.
- To put findings from research into practice to develop an improved product.
- To develop a DIY kit for another individual to assemble their product.

Key Vocabulary

Circuit: A collection of components which make an electrical system.

Circuit component: One of several parts that complete a circuit (e.g. bulb).

Configuration: How different parts are put together to form an object.

Current: The flow of electricity.

Develop: Continue to work on something to make progress or improve it.

DIY: The acronym means 'Do it yourself' and represents various activities that someone chooses to do themselves at home, rather than through a service or professional.

Investigate: Research something by looking at it in greater detail.

Problem-solve: Develop and test solutions to an issue.

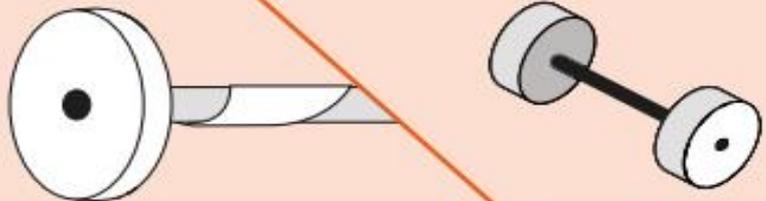
Product analysis: To look at an object and evaluate it based on certain criteria (e.g. function).

Stable: Object does not easily topple over.

Target user: A particular person at whom the product is aimed.

Key Facts:

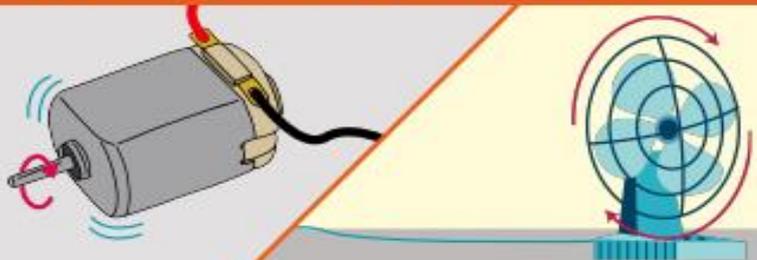
Axles form part of the wheel mechanism in wheeled products such as toy cars, wheelbarrows and bicycles.



For a bicycle to function we need to use our legs and feet to push the pedals that rotate the axle and spin the wheels.

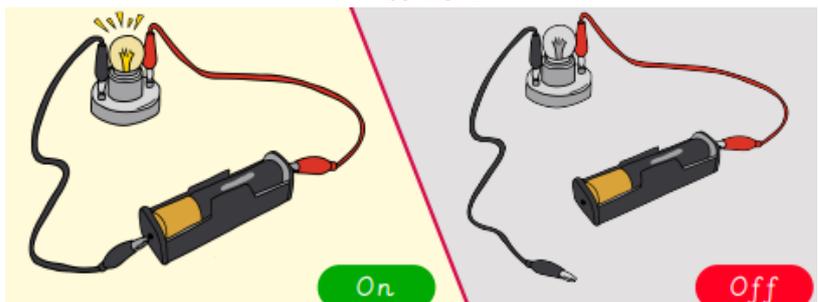


An electric motor converts electrical energy into rotational movement, causing the motor's axle to spin. Motors use electricity instead of human force to move the axle.



A motorised product is an object that uses a motor to function.

Series circuits only have one path for the electrical current to flow.



If there is a break in a series circuit, the electrical current will be cut and all the components will stop working. Causing a break in a series circuit can act as a switch to turn the circuit off.