



Key Knowledge & Vocabulary

Electricity can be generated in different ways. In power stations, turbines generate large amounts of electricity. In batteries, chemical reactions generate smaller amounts of electricity.

Circuits can be made using batteries, wires and electrical components, including bulbs, buzzers and motors. They change electrical energy in light energy (bulbs), sound energy (buzzers) or kinetic energy (motor).

Some materials conduct electricity through them - metals are generally good conductors of electricity. Insulators do not let electricity through them - these materials include plastic, wood, glass and rubber.

Working Scientifically

Fair testing 

Observing over time 

Researching 

Classifying, identifying and comparing 

Exploring 

Seeking patterns 

Which did you use in science lessons and why?

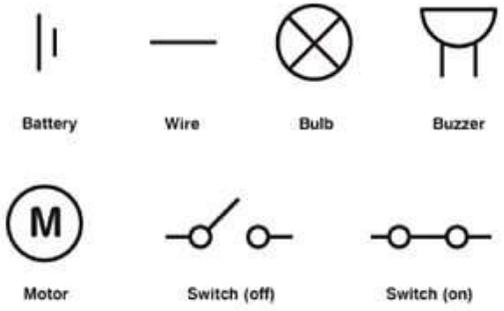
Key Concepts

Materials	Electricity	Power source	Circuit	Electrical component	Switch	Conductors and Insulators	Robots
Objects are made of materials, sometimes only one, sometimes more than one. Materials can have different properties .	Everything is made up of tiny particles, which may have positive or negative charges. Electricity is the presence or flow of these particles.	A circuit always needs a power source , such as a battery , with wires connected to both the positive (+) and negative (-) ends.	Electricity can flow through the components in a complete electrical. We use electric currents to control and operate devices , including phones, computers and light bulbs.	A circuit can also contain other electrical components e.g. bulbs , buzzers or motors . These allow electricity to pass through.	A switch in a circuit to create a gap in a circuit. This can be used to switch it on and off.	Conductors let electricity pass through them easily. Insulators do not allow electricity to pass through them.	Robots are machines . There are lots of types of robots. They move in different ways and do all kinds of jobs.

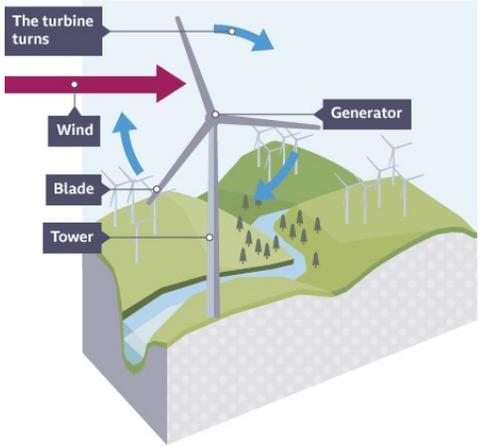
Linking Thinking Across Our Learning Journey

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cause and effect	Cause and effect	Everyday materials	Everyday materials	Magnets	Electricity	Space	Forces

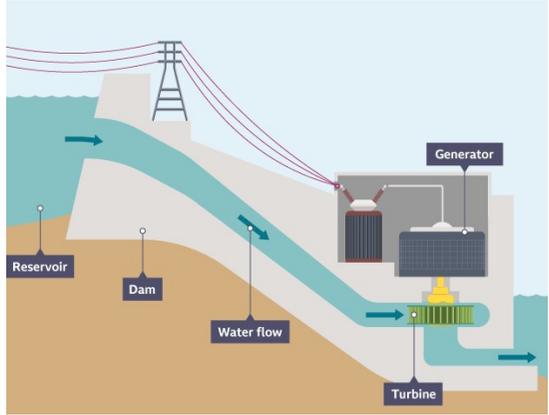
Electrical symbols



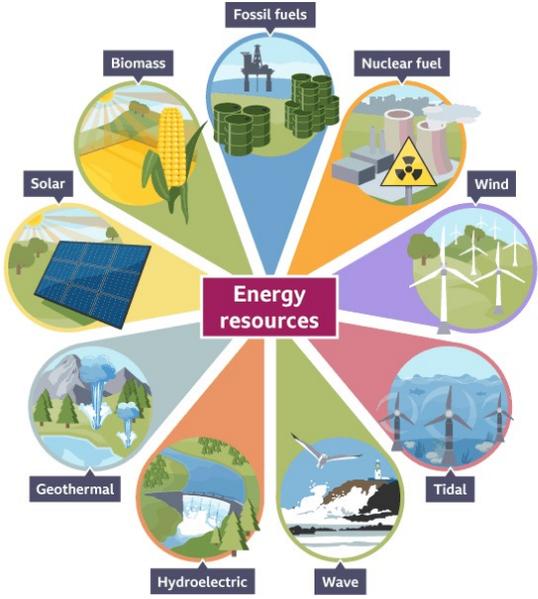
Wind power



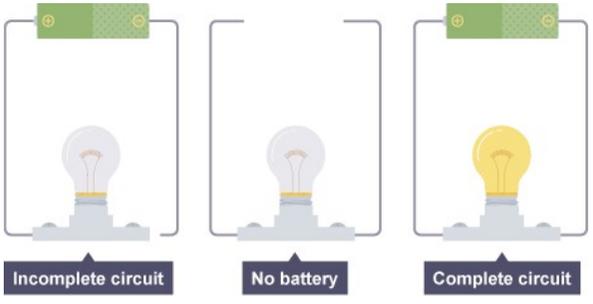
Hydroelectricity



Energy resources



Circuits



Fossil fuels

