Electricity

Year 6 Summer 1 and 2 Oh, I do like to be beside the seaside

Sticky Knowledge

What is a circuit?
A circuit is a device made of other, smaller electrical devices that can move the flow of electricity through itself to power larger devices.

What are the components of a circuit and what is their function?

Bulb, battery, cell, wires, switch, motor, buzzer

How do variations in a circuit affect its output?

The brightness of a lamp or the volume of a buzzer is directly related to the number of cells used in a circuit. On/off switches in a circuit.

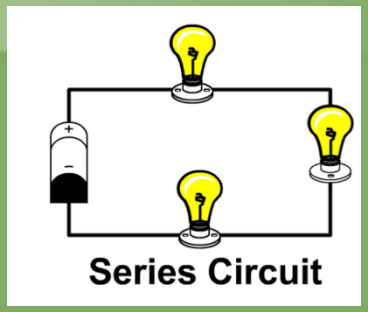
What problems can occur in a circuit?
Wires not connected, low voltage cell, faulty equipment,

What are the dangers of electricity?

- electric shock and burns from contact with live parts.
- injury from exposure to arcing, fire from faulty electrical equipment or installations.
- explosion caused by unsuitable electrical apparatus or static electricity igniting flammable vapours or dusts, for example in a spray paint booth.

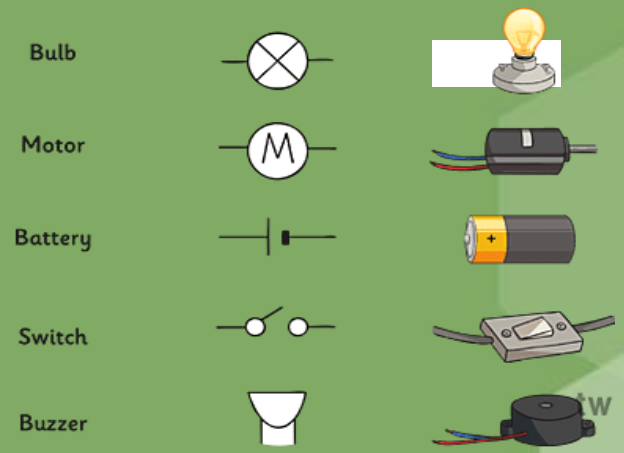
How do electrical circuits apply to the real world?

Lighting, heating, cooling, and refrigeration and for operating appliances, computers, electronics, machinery, and public transportation systems.



Useful websites

Circuits
https://www.bbc.co.uk/bitesize/topics/zj44jxs/year/zncsscw
Electricity
https://www.theschoolrun.com/what-electricity
BBC live lesson - electricity
https://www.youtube.com/watch?v=KYKVf6edVcA



Key Vocabulary

Vocabulary	Definition
Power supply	Can be mains power or battery.
Circuit components	A circuit can be made up of a bulb, battery, cell, wires, switch, motor or buzzer.
Battery/Cell	A cell is a single unit of device that converts chemical energy into electrical energy. A battery is a collection of cells that converts chemical energy into electrical energy.
Series circuit	In a series circuit, all components are connected end-to-end to form a single path for current flow.
Voltage	Voltage is the pressure from an electrical circuit's power source that pushes charged electrons (current) through a conducting loop, enabling them to do work such as illuminating a light.
Conductor	A conductor, or electrical conductor, is a substance or material that allows electricity to flow through it.
Insulator	An insulator is a material which does not easily allow heat and/or electricity to pass through it. Plastic, wood, rubber and glass are examples of good insulators.