Subject Specific Vocabulary

Electricity	A form of energy that can be carried by wires and is used for heating and lighting, and to provide power for devices.
Circuit	A complete route which an electric current can flow around.
Current	A flow of electricity through a wire or circuit.
Conductor	A substance that heat or electricity can pass through.
Insulator	A substance that heat or electricity can't pass through.
Wire	A long thin piece of metal that is used to fasten things or to carry electrical current.
Switch	A device for making and breaking the connection in an electric circuit.
Battery/Cell	A small device that provide the power for electrical items such as torches.

Sticky Knowledge

Many household devices and appliances run on electricity. **Some plug in to the mains and others run on batteries.** Electricity can be hazardous and people should be careful when using it.

An electrical circuit consists of a cell or battery connected to a component using wires. If there is a break in the circuit, a loose connection or a short circuit, the component will not work.

A switch can be added to the circuit to turn the component on and off.

Metals are good conductors so they can be used as wires in a circuit. Non-metallic solids are insulators except for graphite (pencil lead). Water, if not completely pure, also conducts electricity.

Year 4– Electricity

Identify common appliances that run on electricity.

Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.

Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.

Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.

Recognise some common conductors and insulators, and associate metals with being good conductors

Children in Year 4 do not need to use standard symbols for electrical components, as this is taught in Year 6.

(National Curriculum, 2014)


bulb


bulb holder

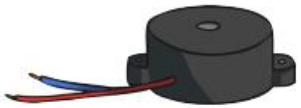

battery


cell


motor


wire


crocodile clip


buzzer

Buzzer	An electrical device that makes a buzzing noise and is used for signalling.
Complete Circuit	A complete and closed path around a circuit, which a circulating electrical current can flow.
Appliances	A device, machine, or piece of equipment, especially an electrical one that is used in the house, such as a cooker or washing machine.
Mains	A type of electricity that is delivered to homes and businesses through an electric grid and used to power everyday items.
Incomplete circuit	A break or missing part in the loop so that an electrical current cannot flow.
Metal	A solid material with good electrical conductivity.
Non-metal	A material that does not contain metal.
Bulb/lamp	A device in a circuit, which provides light by allowing an electrical current to pass through.

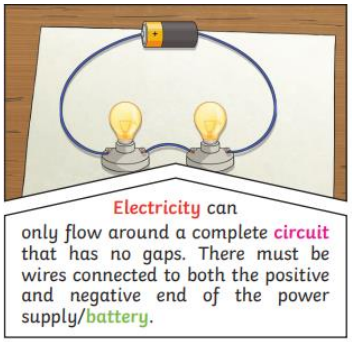
Websites you could look at if you like this topic:

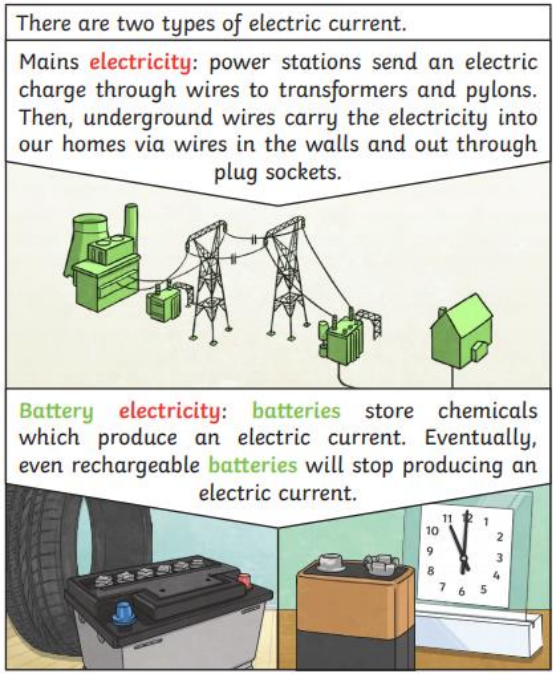
Kids Britannica
https://kids.britannica.com/kids/article/electricity/353091

DK Find out
https://www.dkfindout.com/uk/science/electricity/

BBC Bitesize
https://www.bbc.co.uk/bitesize/articles/zb9dcmn

Switched On Kids
https://www.bbc.co.uk/bitesize/articles/zb9dcmn



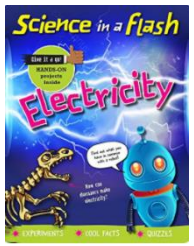


School Values

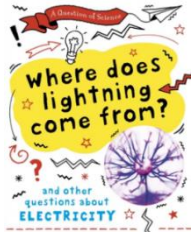
Respect – School equipment

Responsibility – Being careful around investigations

Books that you could read if you like this topic.



Science in a Flash: Electricity - Georgia Amson-Bradshaw



Where does lightning come from? - Claybourne, Anna