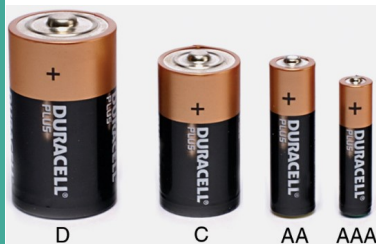




Science Year 3/4 Electricity—Circuits

Cycle B, Summer



Resources

Cells (batteries),
wires, bulbs,
switches, buzz-
ers, conductors,
insulators,

Knowledge or-
ganisers



Key Vocabulary

Recap

Question - a query

Fair test - controlled with one variable, per-
formed to answer a scientific question

Pattern —repeated observations

Evidence - facts to prove findings

Sticky Knowledge

Identify common appliances that run on electricity.

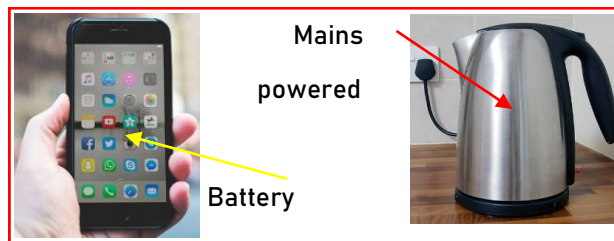
Identify and name the cells, wires, bulbs, switches and buzzers in simple series electrical circuits.

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.

Know how to take precautions to work safely with electricity.



Insulators stop the transfer of energy. They slow down the energy and make it difficult for it to pass through the object.

Conductors help the transfer of energy. They allow energy to easily pass through the object.

Electrical Insulators	Electrical Conductors

Key skills

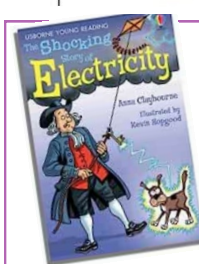
Construct simple series circuits.

When constructing circuits, use different components, for example, bulbs, switches, buzzers and motors.

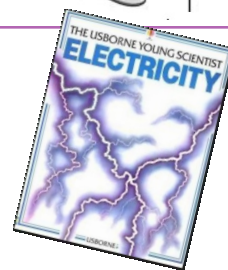
Use our circuits to create simple devices.

Draw the circuit as a pictorial representation (not necessarily using conventional circuit symbols at this stage).

Work scientifically by observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit.



Books
to
enjoy



electricity	The flow of an electric current through a material, e.g. from a power source through wires to an appliance .
appliances	A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.
battery	A device that stores electrical energy as a chemical. Two or more cells joined together form a battery .
circuit	A pathway that electricity can flow around. It is based around wires and a power supply. Examples of components (parts) you can add in to a circuit are bulbs, switches, buzzers and motors.
mains electricity	Electricity supplied through wires to a building.
electrical conductor	A conductor of electricity is a material that will allow electricity to flow through it.
electrical insulator	Materials that are electrical insulators do not allow electricity to flow through them.

