

Gunthorpe Primary School – Knowledge Organiser

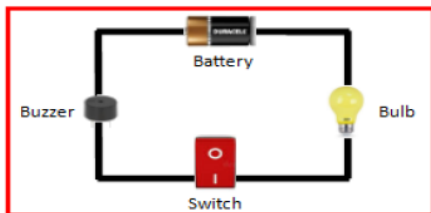
Focus:

Electricity

Year 4:

Summer Term 2

Would the bulb light up?

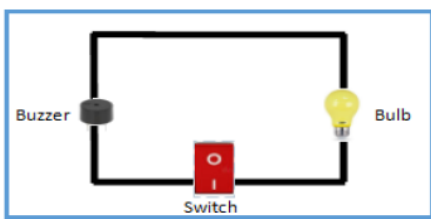


Will the bulb light?

Yes

Why?

The circuit is complete and has a battery and a bulb.

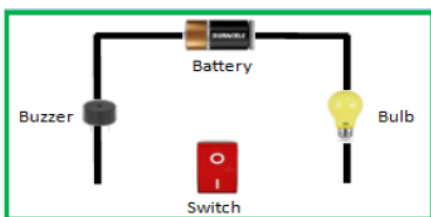


Will the bulb light?

No

Why?

The circuit has no battery to provide the electrical power.

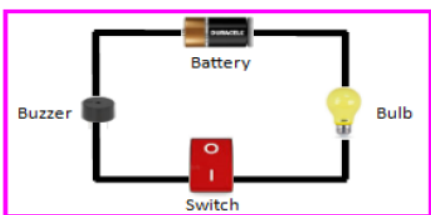


Will the bulb light?

No

Why?

The circuit is not complete.



Will the bulb light?

No

Why?

The switch is in the off (O) position.

This unit builds on:

Year 3: Forces and magnets

This unit leads to:

Year 6: Electricity and light

What is electricity?

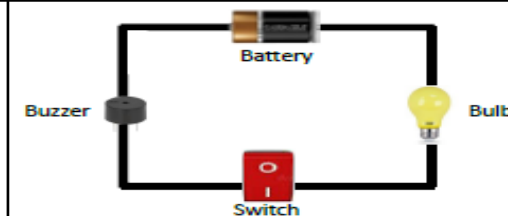
- Electricity is created by generators which can be powered by gas, coal, oil, wind or solar.
- The electrical energy can be converted into other types of energy such as light, heat, movement or sound.
- Electricity is dangerous, so be careful when using electrical appliances.

Common electrical appliances (appliances requiring electricity to perform a job/function):



Electrical Circuits

- Electricity can flow through the components in a **complete electrical circuit**.
- A circuit needs a **power source** (such as a battery) with wires connected to both the positive (+) and negative (-) ends.
- A circuit can also contain other electrical components (such as bulbs, buzzers or motors).
- Electricity will only travel around a circuit that is complete (no gaps).



Key Vocabulary

Electricity: The flow of an electrical current or charge through a material, e.g. from a power source through wires to an appliance.

Electrical appliance/device: Equipment or device designed to perform a job, e.g. washing machine.

Plug: Connects appliances/devices to electricity.

Electrical circuit: A pathway through which an electrical current flows.

Complete circuit: A circuit with no gaps.

Component: A part of something (a part of a circuit).

Battery: A device that stores electrical energy as a chemical.

Connect/connections: Something that is joined or linked.

Switch: Used in a circuit to create a gap allowing electricity to be turned on and off. When a switch is on, the circuit is complete and electricity can travel around the circuit.

Electrical conductor: Materials which let electricity pass through them easily.

Many metals are good electrical conductors. →

Electrical insulator: Materials which do not let electricity pass through them.

Wood, glass, plastic and rubber are good electrical insulators. →



Electrical Conductors



Electrical Insulators