

Key questions:

- Can you identify common appliances that run on electricity?
- Can you construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers?
- Can you 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?
- Can you recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit?
- Can you recognise some common conductors and insulators, and associate metals with being good conductors?

Key Information



An electrical appliance is a device that uses electricity to perform a function.

Most of the large appliances in our home are powered by mains electricity.

Mains electricity is a supply of electrical energy. Mains appliances change or convert this electrical energy into other forms of energy such as heat, light, sound or movement.



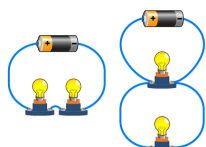
bulbs



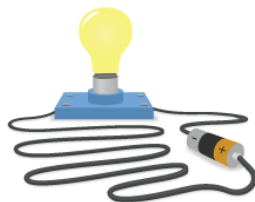
buzzers



cells



series circuit



simple circuit



switches



wires

5 Electrical Conductors



silver

gold

copper

steel

sea water

5 Electrical Insulators



rubber

glass

oil

diamond

dry wood

Did you know...?

- Electricity travels at 6,696,000 miles per hour.
- Electricity plays an important role in the way your heart functions. Muscle cells in the heart are contracted by electricity that runs through your body.
- What's a Volt? A unit of electric force, measuring the potential strength of current.
- The typical lightning bolt packs 100 million volts.
- Static electricity usually happens when you rub things together. It's why a balloon will stick to you after rubbing it against your clothes. Or why you get a shock when walking across carpet and touching something metallic. It's also the cause of lightning. As rain clouds move through the sky, they rub against the air around them.
- A spark of static electricity can measure up to 3,000 volts.

Key vocabulary or people

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|----------------------|------------------|
| • electrical circuit | • buzzers |
| • cells | • appliance |
| • wires | • conductor |
| • bulbs | • insulator |
| • switches | • series circuit |