MAPLE TREE PRIMARY SCHOOL

Learning. Equality. Achievement. Friendship.

Maple Tree Primary School
Year 6: Electricity

What should I already know?

- 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

Knowledge and skills

- associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
- compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches
- use recognised symbols when representing a simple circuit in a diagram

Diagrams

Most big appliances in our house have to be **plugged in**. Theseare powered by **mains power**. Some smaller appliances can bepowered by **batteries**. Some appliances have batteries that need to be **charged** by mains power.

Vocabulary

appliance – a device or piece of equipment that has been made to perform a specific task

battery – a small item used to power small appliances

circuit – a route through which electricity flows

components – the parts of a circuit

conductor – allows electricity to flow through it

electrical – something that uses electricity to work

insulator – doesn't allow electricity to flow through it

mains power – electricity provided by power stations

portable – can be easily carried around

pylon – a tower used for keeping electrical wires above the ground

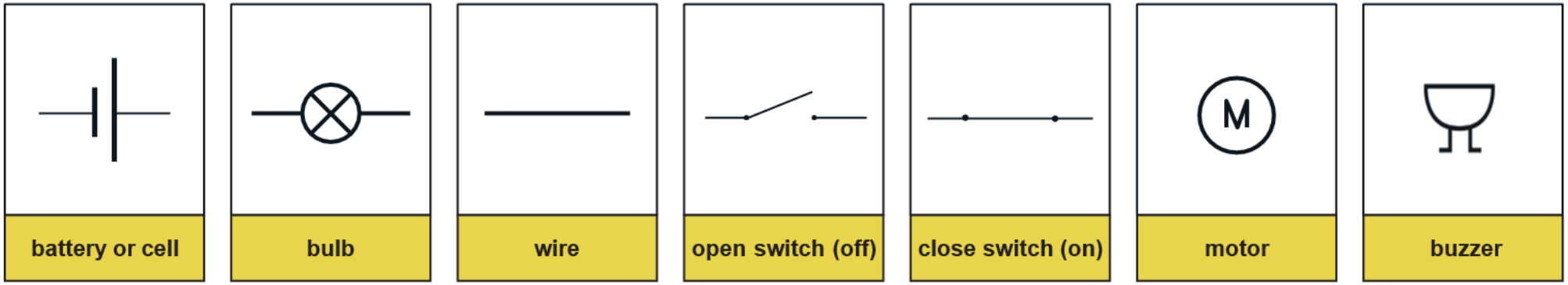
How is electricity made?

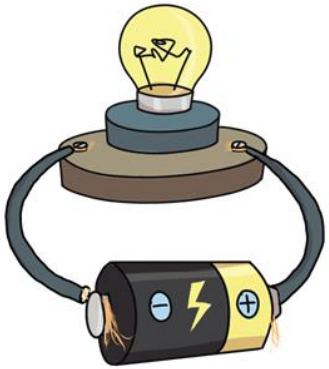
Electricity can be made using a simple **generator**. We could make one in school using a **magnet** and a **coil of wire**. If we turn a magnet around inside a coil of wire, it creates **electricity in** the wire. Doing this only makes a **small amount** of electricity so we need large generators to make enough for everyone. These generators are usually in **power stations**. There are **different types** of power stations.

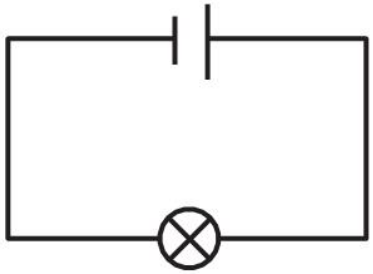
Renewables Mains Power

We can also make electricity using renewable energy. Renewable energy sources like **the Sun**, **wind** and **sea** can be used over andover again and should not run out. We are beginning to use thesesources more as they do not damage our environment.

When scientists draw electrical circuits, they use **scientific symbols** to show **different components.**







The circuit has to be complete to allow the **electricity** to travel all the way around it.

Simple Circuit