

Maple Tree Primary School

Year 6: Electricity

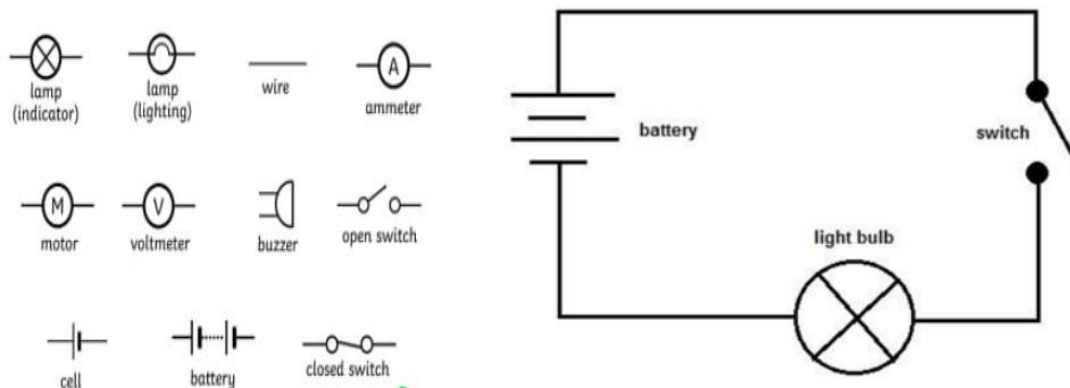
What should I already know?

- 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



Vocabulary

Battery	a container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power.
Bulb	a glass bulb containing a gas, such as argon or nitrogen, at low pressure and enclosing a thin metal filament that emits light when an electric current is passed through it.
Buzzer	an electrical device that makes a buzzing noise and is used for signalling.
Cell	unit structure used to generate an electrical current.
Circuit	a complete circular path that electricity flows through.
Component	a part of a mechanical or electrical system.
Conductor	a material that easily allows the passage of current through it.
Insulator	a material that is a poor conductor (as of electricity or heat).
Switch	a device for making and breaking the connection in an electric circuit.
Volt	unit of electric.
Wires	a flexible metallic conductor.

Notes:

Children might work scientifically by: systematically identifying the effect of changing one component at a time in a circuit; designing and making a set of traffic lights, a burglar alarm or some other useful circuit.

Question 1: With which group of items could you not build a complete circuit?	Start of unit	End of unit
Crocodile leads, bulbs, switch		
Cell, bulb, wires, crocodile leads		

Question 2: All objects reflect light.	Start of unit	End of unit
True		
False		

Question 3: Which of these materials is not a good conductor?		
	True/false	True/false
Copper		
Glass		
Iron		

Question 4: The definition of cell is...	True/False	True/False
a container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power.		

Question 5: The energy source for a circuit is a motor.	
True/False	True/False

Question 6: I can draw a diagram of a simple closed circuit.	
Start of unit	End of unit

Question 7: Why might a circuit not work?	
Start of unit	End of unit

Question 8: I can draw a circuit symbol for a bulb.	
Start of unit	End of unit

Question 9: The definition of insulator is...	True/False	True/False
a material that easily allows the passage of current through it.		

Question 10: I can draw a circuit symbol for a buzzer.	
Start of unit	End of unit