St. Paul's C of E VA Primary and Nursery School
Knowledge Organisers

Year Group: Year 4

Topic: Circuits and Components

Common electrical hazards

1. Overloading a plug extension socket.
2. Exposed wires.
3. Damaged wall sockets.
4. Wires left along the carpet for people to trip over.
5. Placing metal into electrical appliances or open sockets.
6. Electrical appliances and wires near water.

NOTE: WATER IS AN EXCELLENT ELECTRICAL CONDUCTOR SO IT CAN BE VERY DANGEROUS TO HAVE ELECTRICAL DEVICES NEAR WATER

Thomas Edison (1847 – 1931)

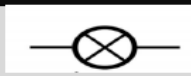
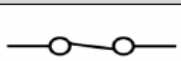
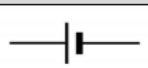
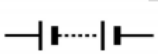
Thomas Edison was born in 1847 and died in 1931. He lived in the state of New Jersey in the United States of America (USA)



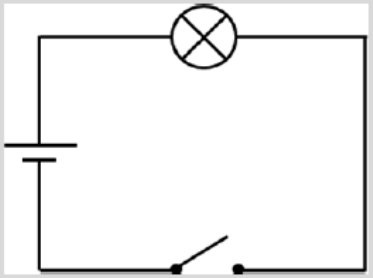
He is known as one of the greatest inventors in history.

He invented the **light bulb**, the **phonograph** (which could record and play sound) and an early video camera called the **Kinetograph**. The films were then watched on a **Kinetoscope** which he also invented.

Electrical circuit symbols

	lamp (indicator)
	lamp (lighting)
	wire
	motor
	buzzer
	open switch
	closed switch
	cell
	battery

A scientific diagram of an open circuit:



The light bulb will not light in this circuit until the switch is closed.

Vocabulary Dozen

circuit	A complete route which an electric current can flow around.
current	A flow of electricity through a wire.
physics	The study of forces including electricity and the way it affects objects.
battery	A small device that provides power for electrical items.
cell	A device used to generate electricity. A battery is an example of a cell.
conductor	Any material that electricity can pass through or along.
insulator	Any material that electricity cannot pass through or along.
buzzer	An electrical device that makes a buzzing sound.
motor	A device that changes electrical energy into movement.
wire	A long thin piece of metal that carries an electrical current often covered in plastic for safety.
voltage	An electrical force that makes electricity move through a wire, measured in volts (V).
socket	A device on a wall that you can plug electrical equipment into.

Electrical Conductors	Electrical Insulators
Copper	Rubber
Iron	Wood
Steel	Plastic
Silver	Paper
Gold	

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