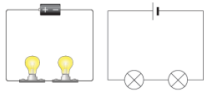
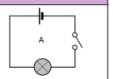
Key Facts



1. Components connected in series are connected along a single conductive path.
2. The same current flows through all of the components but voltage is dropped (lost) across each of the resistances.
3. In a series circuit, every device must function for the circuit to be complete. If one bulb burns out in a series circuit, the entire circuit is broken..

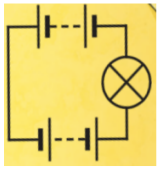
Switches

1. When a switch is open (off) there is a gap in the circuit. 2. Electricity cannot flow around the circuit.	
1. When a switch is closed (on) it makes the circuit complete. 2. Electricity can flow around the circuit.	

Knowledge - What Effects a Circuit

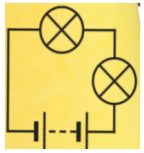
What will make a bulb brighter or a buzzer louder?

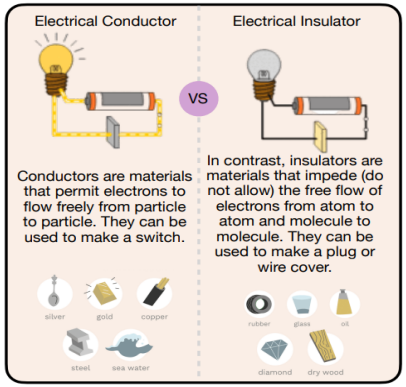
1. More batteries or a higher voltage create more power to flow through the circuit.
2. Shortening the wires means the electrons have less resistance to flow through.

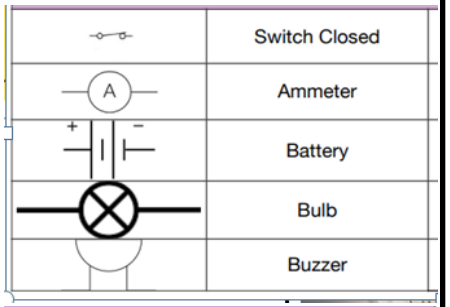


What will make a bulb dimmer or a buzzer quieter?

1. Fewer batteries or a lower voltage give less power to the circuit.
2. More buzzers or bulbs mean the power is shared by more components.
3. Lengthening the wires means the electrons have to travel through more resistance.

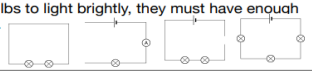


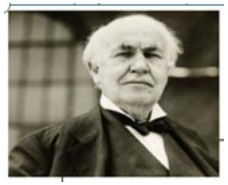




Faults in a Circuit

1. Circuits need power (usually battery or batteries)
2. Circuit must not have any breaks
3. Switch must be on and creating a complete circuit to work
4. For bulbs to light brightly, they must have enough power.





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.

WEMBLEY PRIMARY SCHOOL

Year 6 Science

Autumn 2

Electricity

Science strand - Physics

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

Vocabulary

Word	Definition
Biomass energy	Energy generated or produced by living or once-living organisms
Electrical Conductor	An object or type of material that allows the flow of charge to run through it.
Electrical Insulator	An object or type of material that does not allows the flow of charge to run through it.
Series circuit	A circuit where all of the current flows through each part of the circuit.
Fossil Fuels	a natural fuel such as coal or gas, formed in the geological past from the remains of living organisms.
Components	Parts of an electric circuit. Battery, cells, bulbs, buzzer, motors and switches are examples.
Ammeter	measures the current in a circuit
Complete Circuit	A **complete circuit** is a **complete** loop with electricity flowing the way it's supposed to flow: from the battery, to the component, and back to the battery again.
Transmission	the bulk movement of **electrical** energy from a generating site, such as a power plant, to an **electrical** substation.
Renewable energy	energy sources that do not run ou