

Year 6: What is the effect of changing a component in a circuit?

Subject Specific Vocabulary		Electrical symbols	Sticky Knowledge about Electricity																								
conductor	Some materials let electricity pass through them easily. These materials are known as electrical conductors.	<table><thead><tr><th>Component</th><th>Symbol</th><th>Purpose</th></tr></thead><tbody><tr><td>Cell (Battery)</td><td></td><td>Provides electrical energy</td></tr><tr><td>Power supply</td><td></td><td>Alternative to using cells</td></tr><tr><td>Wire</td><td></td><td>Allows current to travel</td></tr><tr><td>Bulb/light</td><td></td><td>Converts electrical energy into heat and light</td></tr><tr><td>Motor</td><td></td><td>Converts electrical energy into movement energy</td></tr><tr><td>Buzzer</td><td></td><td>Converts electrical energy into sound energy</td></tr><tr><td>Switch</td><td></td><td>Allows circuit to be opened or closed</td></tr></tbody></table>	Component	Symbol	Purpose	Cell (Battery)		Provides electrical energy	Power supply		Alternative to using cells	Wire		Allows current to travel	Bulb/light		Converts electrical energy into heat and light	Motor		Converts electrical energy into movement energy	Buzzer		Converts electrical energy into sound energy	Switch		Allows circuit to be opened or closed	☐ Electricity travels at the speed of light. That's more than 186,000 miles per second!
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insulator	Plastic, wood, glass and rubber are good electrical insulators.		☐ Electricity comes from the power station, the wind, the sun, water and even an animal's poo!																								
socket	A socket is a safe device to plug your electrical items into at home. Almost every room at home will have at least one socket.																										
series circuits	A series circuit is one that has more than one resistor, but only one path through which the electricity (electrons) flows.		☐ Electricity is a type of energy that builds up in one place (static), or flows from one place to another (current electricity).																								
cells	An electrical cell is a device that is used to generate electricity, or one that is used to make chemical reactions possible by applying electricity.		☐ Coal is the biggest source of energy for producing electricity. Coal is burned in furnaces that boil water and create steam.																								
volts	Voltage is an electrical potential difference, the difference in electric potential between two places.		☐ A popular way of generating electricity is through hydropower. This is a process where electricity is made by water which spins turbines attached to generators.																								
generator	A machine that converts energy into electricity.		☐ A bolt of lightning can measure up to 3,000,000 volts, and lasts less than one second!																								
turbine	A machine that creates continuous power in which a wheel, or something similar, moves round and round by fast moving water, steam, gas or air.		☐ Electric fields work in a similar way to gravity. Whereas gravity always attracts, electric fields can either attract or repulse.																								
fuses	These are safety devices. A fuse is a strip of wire that melts and breaks an electric circuit if it goes over a safe level.																										
Thomas Edison	He was a great inventor that came up with a way of making the electric light bulb accessible for homes, industry and outside in the streets.																										
		A Scientist just like me Thomas Edison Important facts to know by the end of the electricity topic: • Know that the brightness of a bulb is associated with the voltage. • Compare and give reasons for variations in how components function. • Use recognised symbols when representing a simple circuit in a diagram. • Construct simple series circuits. • Be able to answer questions about what happens when they try different components, for example; switches, bulbs, buzzers and motors.																									

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