

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 border="1"> <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	<input type="checkbox"/> 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.		<input type="checkbox"/> 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.		<input type="checkbox"/> Electricity is a type of energy that builds up in one place (static), or flows from one place to another (current electricity).																								
series circuits	A series circuit is one that has more than one resistor, but only one path through which the electricity (electrons) flows.		<input type="checkbox"/> Coal is the biggest source of energy for producing electricity. Coal is burned in furnaces that boil water and create steam.																								
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.	<p>Important facts to know by the end of the electricity topic:</p> <ul style="list-style-type: none"> • 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. 	<input type="checkbox"/> 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.																								
volts	Voltage is an electrical potential difference, the difference in electric potential between two places.			<input type="checkbox"/> A bolt of lightning can measure up to 3,000,000 volts, and lasts less than one second!																							
generator	A machine that converts energy into electricity.			<input type="checkbox"/> Electric fields work in a similar way to gravity. Whereas gravity always attracts, electric fields can either attract or repulse.																							
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.																										
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.																										