

Year 6: Electricity Knowledge Mat

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!
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																									
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 pool!																									
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.																										