






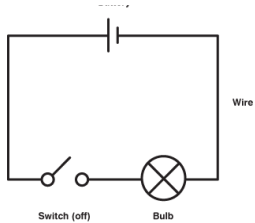
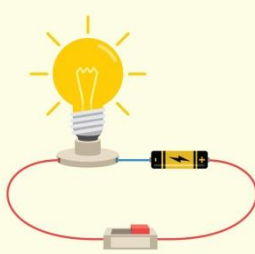




Leamington Primary Science Knowledge Organiser Year 6 – Electricity

Strand – Physics



What I should already know	What I will learn	Important words to help me. (vocabulary)	Ideas for Scientific Enquiry																								
<ul style="list-style-type: none"> • common appliances that run on electricity. • construct and draw with labels a simple series electrical circuit • whether a lamp with light up as part of a simple circuit • explain that a switch opens and closes a circuit • some materials are conductors and some are insulators • metals are good conductors 	<p><u>How has electricity impacted lives?</u> Electricity is an energy. This energy can be used to power electrical items such as toasters, kettles, cookers, televisions and computer tablets. Electrical energy is caused by electrons (the particles in atoms) moving about to make a current. It is measured in amps.</p> <p><u>What will make a bulb brighter or a buzzer louder?</u> More batteries or a higher voltage create more power to flow through the circuit. Shortening the wires means the electrons have less resistance to flow through</p> <p><u>What affects the variations of how components function?</u> Fewer batteries or a lower voltage give less power to the circuit. More buzzers or bulbs mean the power is shared by more components. Lengthening the wires means the electrons have to travel through more resistance. Switches can be used to complete or break the circuit. These symbols are used to create electrical circuit diagrams:</p>	<table border="1"> <tr> <td>electricity</td> <td>A form of energy resulting from the existence of charged particles</td> </tr> <tr> <td>electrons</td> <td>Very small particles that travel around an electrical circuit</td> </tr> <tr> <td>electric current</td> <td>A flow of electricity which results from the ordered directional movement of electrically charged particles. Measured in amps.</td> </tr> <tr> <td>cell/battery</td> <td>A device that stores energy as a chemical until it is needed. A cell is a single unit. A battery is a collection of cells</td> </tr> <tr> <td>voltage</td> <td>An electrical force that makes electricity move through a wire, measured in volts</td> </tr> <tr> <td>circuit</td> <td>A path that an electrical current can flow around</td> </tr> <tr> <td>symbols</td> <td>Circuit symbols are used in circuit diagrams to show how a circuit is connected together. Each component has a unique symbol</td> </tr> <tr> <td>bulb</td> <td>A glass bulb which provides light by passing an electrical current through a filament</td> </tr> <tr> <td>buzzer</td> <td>An electrical device that makes a buzzing noise and is used to signalling</td> </tr> <tr> <td>motor</td> <td>A machine powered by electricity that supplies motive power for a vehicle or other moveable device</td> </tr> <tr> <td>switch</td> <td>A device for making and breaking the connection in an electric circuit</td> </tr> <tr> <td>component</td> <td>A device within the circuit</td> </tr> </table>	electricity	A form of energy resulting from the existence of charged particles	electrons	Very small particles that travel around an electrical circuit	electric current	A flow of electricity which results from the ordered directional movement of electrically charged particles. Measured in amps.	cell/battery	A device that stores energy as a chemical until it is needed. A cell is a single unit. A battery is a collection of cells	voltage	An electrical force that makes electricity move through a wire, measured in volts	circuit	A path that an electrical current can flow around	symbols	Circuit symbols are used in circuit diagrams to show how a circuit is connected together. Each component has a unique symbol	bulb	A glass bulb which provides light by passing an electrical current through a filament	buzzer	An electrical device that makes a buzzing noise and is used to signalling	motor	A machine powered by electricity that supplies motive power for a vehicle or other moveable device	switch	A device for making and breaking the connection in an electric circuit	component	A device within the circuit	<p><u>Pattern Seeking</u> Investigation into variations of how components function</p> <p><u>Fair/Comparative Test</u> Investigation into which material is the best conductor of electricity</p>
electricity	A form of energy resulting from the existence of charged particles																										
electrons	Very small particles that travel around an electrical circuit																										
electric current	A flow of electricity which results from the ordered directional movement of electrically charged particles. Measured in amps.																										
cell/battery	A device that stores energy as a chemical until it is needed. A cell is a single unit. A battery is a collection of cells																										
voltage	An electrical force that makes electricity move through a wire, measured in volts																										
circuit	A path that an electrical current can flow around																										
symbols	Circuit symbols are used in circuit diagrams to show how a circuit is connected together. Each component has a unique symbol																										
bulb	A glass bulb which provides light by passing an electrical current through a filament																										
buzzer	An electrical device that makes a buzzing noise and is used to signalling																										
motor	A machine powered by electricity that supplies motive power for a vehicle or other moveable device																										
switch	A device for making and breaking the connection in an electric circuit																										
component	A device within the circuit																										
<p>Interesting Facts</p>																											
<ul style="list-style-type: none"> • Electricity travels at the speed of light, about 300,000km per second • Electric eels can produce strong electric shocks of around 500 volts • One flash of lightning could power 1000 houses for a whole year! 	<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>Battery</p> </div> <div style="text-align: center;">  <p>Wire</p> </div> <div style="text-align: center;">  <p>Bulb</p> </div> <div style="text-align: center;">  <p>Buzzer</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p>Motor</p> </div> <div style="text-align: center;">  <p>Switch (off)</p> </div> <div style="text-align: center;">  <p>Switch (on)</p> </div> </div>		<div style="text-align: center;">  </div> <div style="text-align: center; margin-top: 20px;">  </div>																								

