




## Year 4 Electricity.

Key vocabulary	
<b>battery</b>	A device that makes electricity to power other objects.
<b>bulb</b>	A device that creates electric light.
<b>circuit</b>	A path that an electric current travels along.
<b>conductor</b>	A material that allows the passage of electricity through it.
<b>electricity</b>	Energy caused by the movement of electrons through matter.
<b>electron</b>	Particles that move through matter to result in electricity.
<b>insulator</b>	A material that does not conduct electricity.
<b>motor</b>	A machine that causes motion or power.
<b>National Grid</b>	A company that provides electricity in the UK.
<b>switch</b>	A device that opens and closes an electric circuit.

Key Knowledge	
<b>Preceding</b>	<ul style="list-style-type: none"> <li>• Things that are metallic allow electricity to flow through.</li> <li>• Metals are a group of materials that are often strong.</li> <li>• Many man-made sources of light are a result of electricity (either battery or mains powered).</li> </ul>
<b>Current</b>	<ul style="list-style-type: none"> <li>• Current is the flow of electrons around a circuit.</li> <li>• Many household devices and appliances run on electricity.</li> <li>• Some devices run on batteries - others are powered by mains electricity</li> <li>• Electrical current flows when there is a complete circuit.</li> <li>• Current is the flow of electricity around a circuit</li> <li>• When there is a break in a circuit a lamp will not light up as the circuit is not complete</li> <li>• An open switch means that there is not a complete circuit and electrical current will not flow</li> <li>• Electricity flows easily through some materials (conductors) and poorly through others (insulators)</li> <li>• Most metals are good conductors of electricity</li> <li>• Wires contain a metal within them that conducts electricity and allow current to flow</li> <li>• Wires are covered in an insulator to prevent electrical shocks if people touch them</li> <li>• High levels of electrical current can be dangerous</li> <li>• Water is a conductor of electricity - electrical devices should be kept away from water</li> </ul>

Scientific Enquiry	
<b>Identifying and classifying</b>	<p><i>How would you group these electrical devices base on where the electricity comes from?</i></p> 
<b>Comparative testing</b>	<p><i>Which material is the best conductor of electricity?</i></p> 
<b>Observing over time</b>	<p><i>How long does a battery light a torch for?</i></p> 
<b>Fair Testing</b>	<p><i>How does the thickness of a conducting material affect how bright the lamp is?</i></p> 