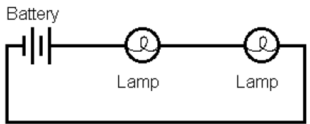




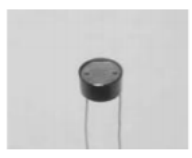
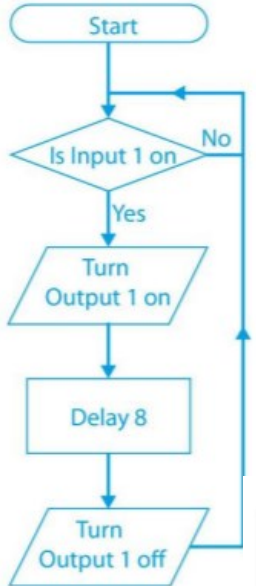
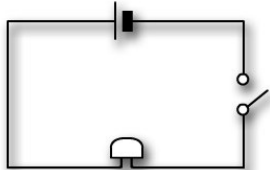
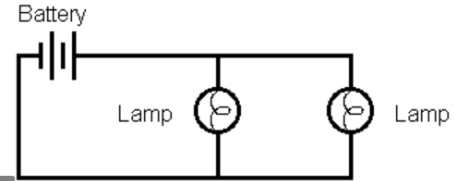


Year 6 Electrical systems (more complex switches and circuits)

**Prior Learning:** Understanding the essential characteristics of a series circuit and experience of creating battery-powered, functional, electrical product. Initial experience of using computer control software and an interface box or a standalone box e.g. writing and modifying a program to make a light flash on and off.

Facts	Vocabulary
<p><u>Series circuits.</u></p> <ul style="list-style-type: none"> <li>Series circuits are connected along a single path.</li> <li>Therefore, the same current flows through all of the components but the voltage is dropped (lost).</li> </ul> 	<ol style="list-style-type: none"> <li>Flowchart— a diagram of the sequence of movements things involved in a complex system or activity take.</li> <li>Open switch – when a switch is positioned such that electricity cannot flow through it.</li> <li>Closed switch – when a switch is positioned such that electricity can flow through it.</li> <li>Modelling – to realise and manipulate ideas in a tangible form.</li> </ol>
<p><u>Switches.</u></p> <ul style="list-style-type: none"> <li>Latching switches are switches that maintain their state after being activated. A push-to-make, push-to-break switch would therefore be a latching switch – each time you actuate it, whichever state the switch is left in will persist until the switch is actuated again.                      </li> <li>A micro-switch is a switch that can operate as push-to-break switch or a push-to-make switch.                      </li> <li>A Reed switch is a switch operated by a magnet.                      </li> <li>A Tilt switch is a switch that works when tilted at an angle.                      </li> <li>A Light dependent resistor (LDR) is a sensor that operates when light is shined on it.                      </li> </ul>	<p><u>Flowcharts.</u></p> <ul style="list-style-type: none"> <li>A flowchart is a diagram of a sequence of events that include when a decision is made.</li> <li>An example would be when a switch is pressed, a buzzer is activated.</li> <li>Flowcharts are a simple set of instruction that something will follow using 'control language' which focuses on inputs and outputs.</li> </ul>  <p>Switch</p> <p>Bulb/buzzer</p> 
<p><u>Parallel circuits.</u></p> <ul style="list-style-type: none"> <li>In a parallel circuit the current is divided into separate paths with each path receiving the same voltage.</li> </ul> 	<p><u>Job opportunities</u></p> <ul style="list-style-type: none"> <li>Electrician</li> <li>Electrical engineer</li> <li>Construction</li> <li>Technician</li> </ul>