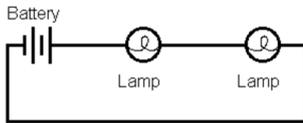
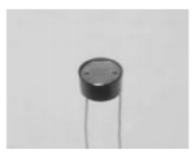
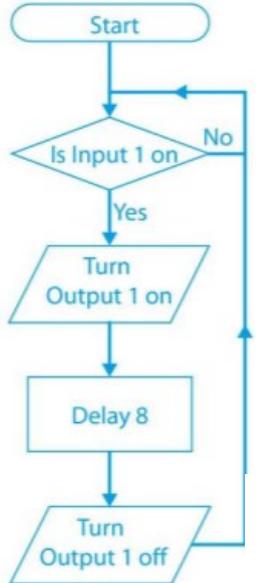
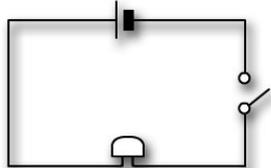
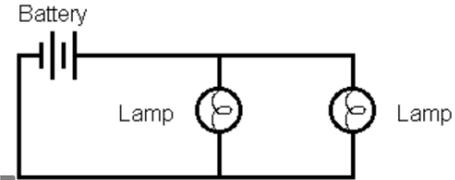


Electrical systems (more complex switches and circuits)

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