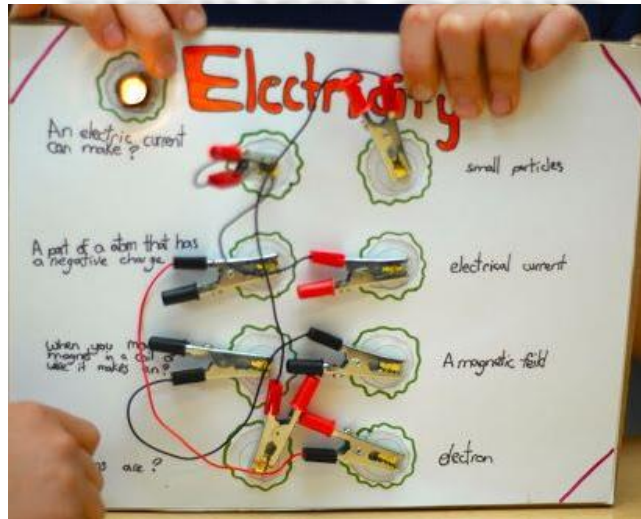
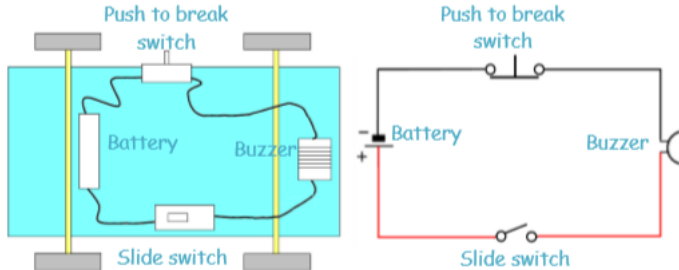
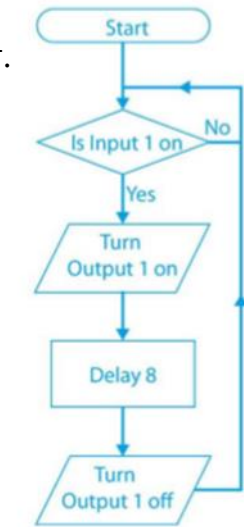


# Year 5/6: More complex switches and circuits

| Subject Specific Vocabulary   |  | Prior Learning Y3/4  | Sticky Knowledge   |
|---|--|--|--|
| <p><b>open switch</b></p> <p>when a switch is positioned such that electricity cannot flow through it.</p>  | <p>Understanding of the essential characteristics of a series circuit and experience of creating a 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.</p> | <p><b>Future Learning KS3</b></p> <p>Understand how more advanced electrical and electronic systems can be powered and used in their products. Select from and use specialist tools, techniques, processes, including computer aided design. Investigate new and emerging technologies.</p> <p><b>Electrical Game</b></p>  |   |
| <p><b>closed switch</b></p> <p>when a switch is positioned such that electricity can flow through it.</p>   | <p>when a switch is positioned such that electricity can flow through it.</p>  |  |  |
| <p><b>normally open</b></p> <p>the term used to describe when a switch is in the off position, i.e. the switch is open and no electricity can flow when the button on not pressed.</p>  | <p>the term used to describe when a switch is in the on position i.e. the switch is closed and electricity can flow when the button is not pressed</p>   |  |  |
| <p><b>normally closed</b></p> <p>the term used to describe when a switch is in the on position i.e. the switch is closed and electricity can flow when the button is not pressed</p>  | <p>components that are used to control an electrical circuit e.g. switches or sensors.</p>   | <p>components that produce an outcome e.g. bulbs and buzzers.</p>  | <ul style="list-style-type: none"> <li>• Test a system to demonstrate its effectiveness.</li> <li>• Research an inventor linked to the topic e.g. Edison</li> <li>• Practise making secure electrical connections.</li> <li>• Create and modify a computer control program to enable an electrical product to work automatically in response to changes in the environment.</li> </ul> |
| <p><b>input devices</b></p>   | <p>components that are used to control an electrical circuit e.g. switches or sensors.</p>   | <p>components that produce an outcome e.g. bulbs and buzzers.</p>  | <ul style="list-style-type: none"> <li>• Drawings that indicate the design decisions made, including the location of the electrical components and how they work as a system with an input, process and output.</li> </ul>   |
| <p><b>computer control input</b></p> <p>when a switch, such as a micro switch, sends a signal to a computer control box to activate a sequence of events such as a buzzer or light being used to attract attention or alert people.</p> | <p>when a switch, such as a micro switch, sends a signal to a computer control box to activate a sequence of events such as a buzzer or light being used to attract attention or alert people.</p>   | <p>when a switch, such as a micro switch, sends a signal to a computer control box to activate a sequence of events such as a buzzer or light being used to attract attention or alert people.</p>   | <p>Example control program</p>   |
| <p><b>modelling</b></p> <p>to realise and manipulate ideas in a tangible form.</p>  | <p>to realise and manipulate ideas in a tangible form.</p>   | <p>to realise and manipulate ideas in a tangible form.</p>   | <ul style="list-style-type: none"> <li>• Apply there understanding of computing to program, monitor and control their products</li> </ul>  |