

Year 6 Electrical systems (more complex switches and circuits)

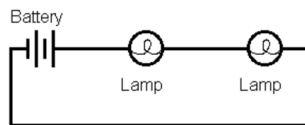
Prior Learning: Understanding the essential characteristics of a series circuit and experience of creating battery-powered, functional, electrical product. Initial experience of using computer control software and an interface box or a standalone box e.g. writing and modifying a program to make a light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

**Facts**

**Vocabulary**

Series circuits.

- Series circuits are connected along a single path.
- Therefore, the same current flows through all of the components but the voltage is dropped (lost).



1. Flowchart— a diagram of the sequence of movements things involved in a complex system or activity take.
2. Open switch – when a switch is positioned such that electricity cannot flow through it.
3. Closed switch – when a switch is positioned such that electricity can flow through it.
4. Modelling – to realise and manipulate ideas in a tangible form.

Switches.

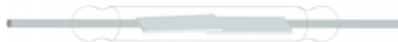
- Latching switches are switches that maintain their state after being activated. A push-to-make, push-to-break switch would therefore be a latching switch – each time you actuate it, whichever state the switch is left in will persist until the switch is actuated again.



- A micro-switch is a switch that can operate as push-to-break switch or a push-to-make switch.



- A Reed switch is a switch operated by a magnet.



- A Tilt switch is a switch that works when tilted at an angle.

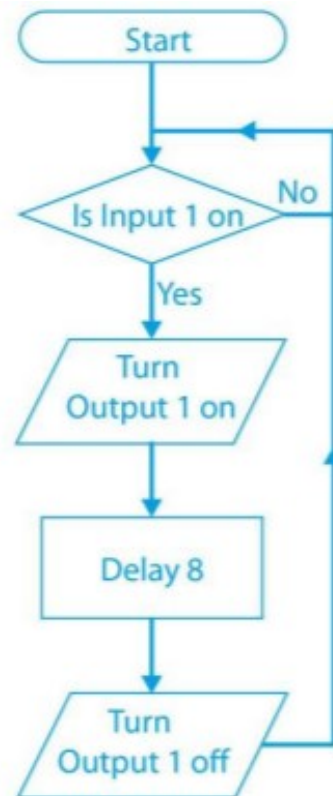


- A Light dependent resistor (LDR) is a sensor that operates when light is shined on it.



Flowcharts.

- 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.



Parallel circuits.

- In a parallel circuit the current is divided into separate paths with each path receiving the same voltage.

