

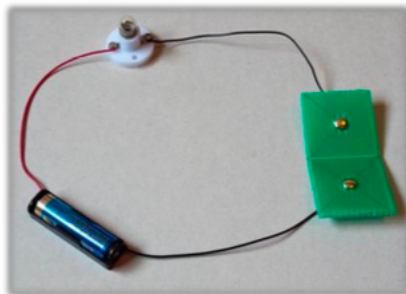


Year 4

DT - Electrical systems: Simple circuits and switches

Key vocabulary

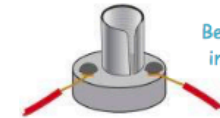
| | |
|----------------------|--|
| Circuit | Path through which electricity passes |
| Conductor | A material which allows electric current to pass through it |
| Insulator | A material which does not easily allow electric current to pass through it |
| Prototype | A model made to test whether a design will work |
| Push-to-break switch | A switch turned off by pressing it |
| Push-to-make switch | A switch turned on by pressing it |
| Reed switch | A switch operated by a magnet |
| Toggle switch | a switch operated when a lever is pressed |
| System | A set of related parts or components that achieve an outcome |
| Output devices | Components that produce an outcome e.g. bulbs or buzzers |
| Input devices | Components that are used to control an electrical circuit e.g. switches |



Examples of switches

Making secure connections

Connecting block



Bulb holder
Bend wire around screw in direction of turning when tightening

Twist strands of wire together

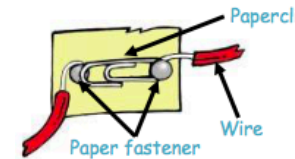


Wrap ends around

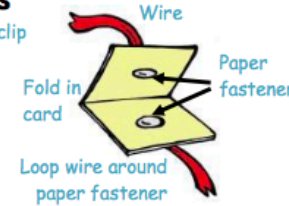


Tape over

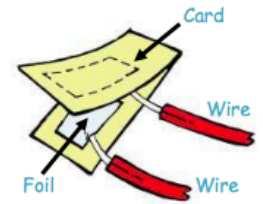
Handmade switches



Paperclip
Wire
Paper fastener



Wire
Fold in card
Paper fastener
Loop wire around paper fastener



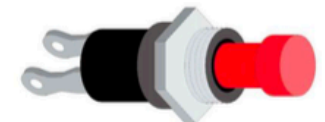
Card
Wire
Foil
Wire

Commercial switches



Push-to-break switch

The switch is off while the button is pushed, but returns to its 'on' position when button is released.



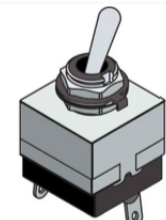
Push-to-make switch

When you push, the electricity flows through the circuit, but when you release it the circuit is broken and the switch is off.



Reed switch

Activated by a magnet - this closes the contacts and completes the circuit.



Toggle switch
Simple on/off switch