

Year 4 Electrical systems (simple circuits and switches).

Prior Learning: Constructed a simple series electrical circuit in science, using bulbs, switches and buzzers. Cut and joined a variety of construction materials, such as wood, card, plastic, reclaimed materials and glue.

Facts

Switches

◇ Push-to-break switches are off whilst the button is pushed but returns to its 'on' position when it is released.



◇ Push-to-make switches allows the electricity to flow through the circuit when it is pressed but when it is released the circuits is broken and the switch is off.

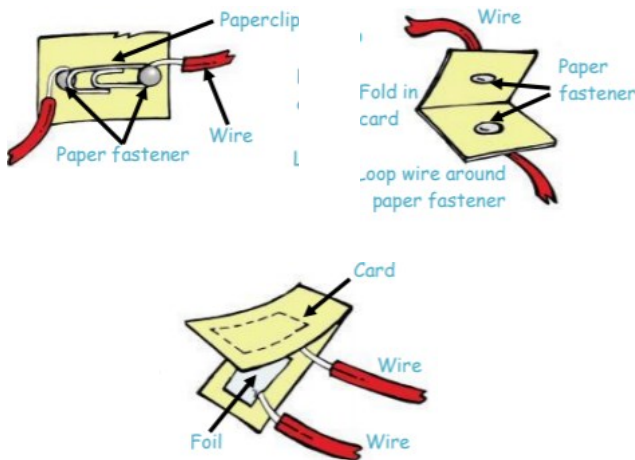


Vocabulary

1. Circuit—path through which electricity passes.
2. Conductor—a material which allows an electrical current to pass through it.
3. Insulator—a material which does not easily allow an electrical current to pass through it.
4. Push-to-break switch—a switch turned off by pressing it.
5. Push-to-make switch—a switch turned on by pressing it.
6. Input device—components that are used to control an electrical circuit (switches).
7. Output device—components that produce an outcome (bulbs, buzzers).

Handmade switches

⇒ There are different ways of making handmade switches. They involve using a conducting material between two wires that would complete the circuit when pushed together.



Circuits and switches.

* Lots of toys and appliances use circuits with components including switches to make sounds and lights.



Youtube:

<https://www.youtube.com/watch?v=m6Dk6YY8pN8>

Video showing a simple circuit that would be inside of a torch.



Job Opportunities:

Electrician, toy designer, computer engineer, technology designer

