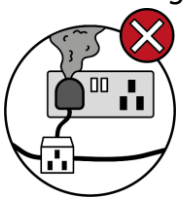
Electricity

Electrical safety

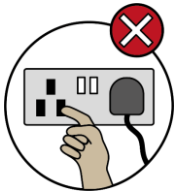
It is important to be safe when working with electricity.

Don't pull wires



Don't overload sockets

Don't put your fingers in sockets



Don't climb trees or fly kites near power lines

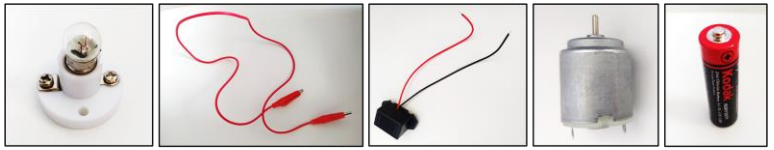
Don't use electrical appliances near water

Complete circuits

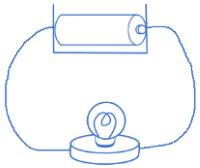
A complete circuit must have:

- at least one cell
- At least one component
- have all the **components** connected in a loop.

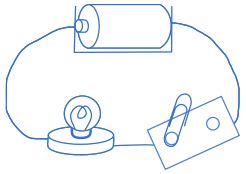
If any of these things are missing it is an **incomplete circuit.**



lamp wire buzzer motor cell



A complete circuit.



A switch can be used to create a break in a circuit.

Key vocabulary

- **electrical appliance/device**: something that needs electricity to work. a kettle is an electrical appliance. it uses electricity to heat up a metal wire that then boils the water.
- **electrical circuit:** a path that electricity can flow through. the path must be a complete loop (complete circuit) for the components to work.
- **incomplete circuit**: a loop that is *not* complete. electricity cannot flow through, so the components in the circuit will not work.

Conductors and insulators

- Materials that let electricity pass through them easily are known as good **electrical conductors.**
- Copper, iron, steel are good conductors.
- **Electrical insulators** do not allow electricity to pass though them easily. They are poor electrical conductors.
- Wood, plastic, rubber and air are good insulators.