



battery (cell) is portable and a stored form of energy



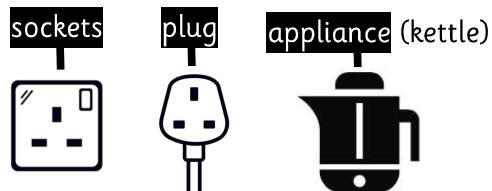
negative (-)
(end of battery)

positive (+)
(end of battery)

electricity is a form of energy that can be powered from a **battery** or the **mains**

mains electricity supplied to a building by wires

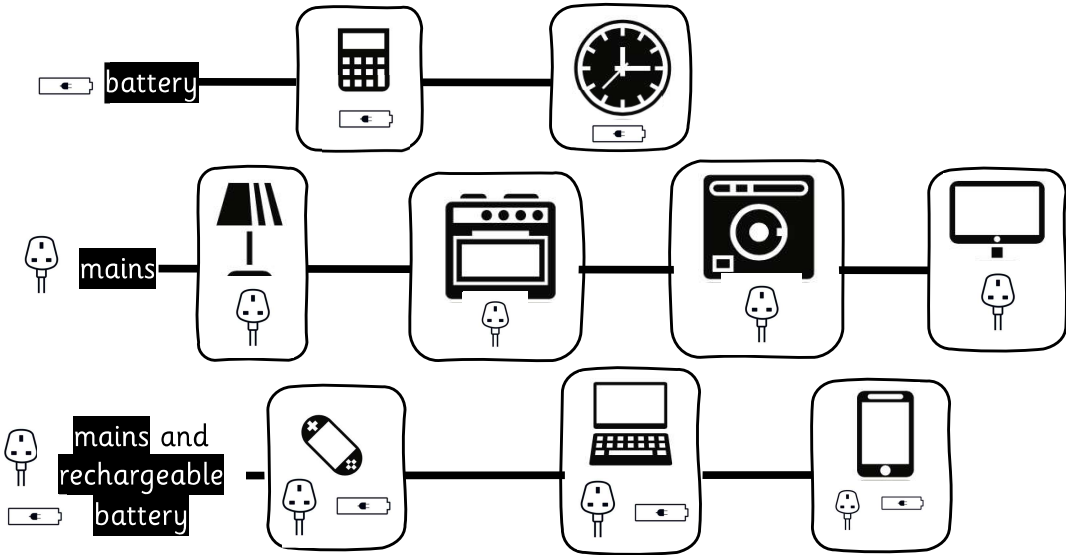
sockets and plugs connect **appliances** and devices to the electrical power source



appliances and devices require different electrical power:

- battery
- mains
- both battery and mains

National Grid manages electricity and gas distribution for England, Scotland and Wales



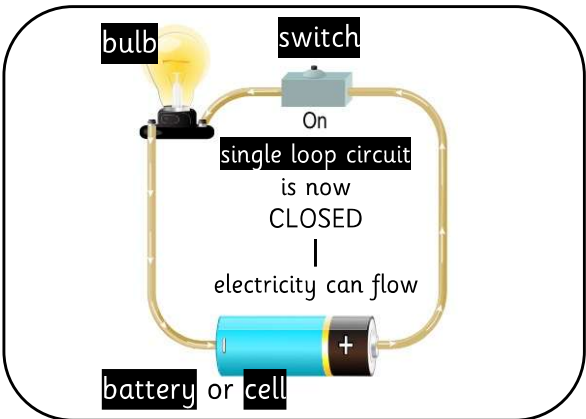
current the 'flow' of electricity through the circuit



simple series circuit (single loop circuit) - electrical current follows one path

electrical components

- battery** or **power cell**
- bulb**
- motor**
- switch**
- buzzer**



conductors – materials that **allow** electricity to flow

- aluminium**
- copper**
- graphite**
- steel**
- tap water**

insulators – materials that **do not** allow electricity to flow

- air**
- glass**
- wood**
- rubber**
- paper**
- plastic**

It is dangerous to play with plugs

- Never put liquids near electrical items
- Never touch exposed wires

Never touch switches with wet hands

- Don't fly kites near overhead power lines