


Year 4 Summer 1 Knowledge Organiser – Science

Electricity




Science study

Electricity

Year ____ Term ____

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


sockets



plug



appliance (kettle)




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





battery







mains












mains and rechargeable battery








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

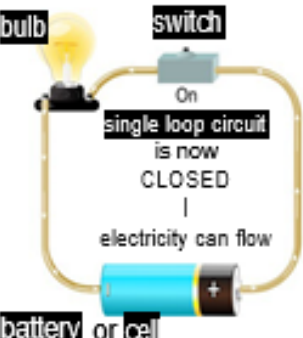


switch



buzzer

bulb **switch**




single loop circuit is now **CLOSED**

electricity can flow


battery or **cell**

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



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