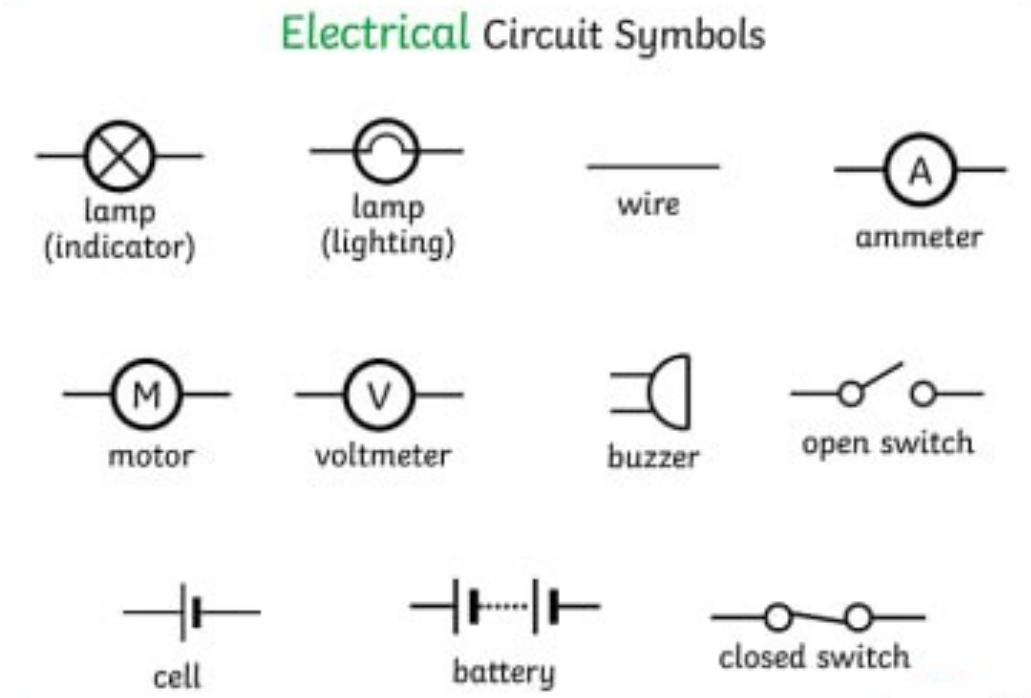
# YEAR 6 - Electricity and Light facts

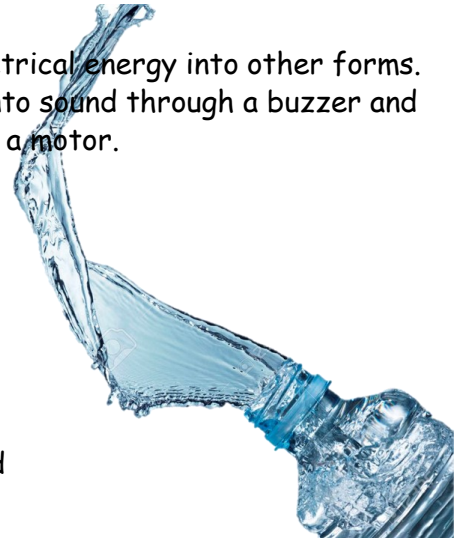
| Key Vocabulary for the topic. | |
|---|---|
| Components | The different parts that make up an electrical circuit |
| Circuit | A circuit is a complete path around which electricity can flow. It must include a source of electricity, such as a battery or cell. |
| Cell | An electrical cell is a device used to generate electricity |
| Battery | A battery is one or more cells, connected |
| Voltage | Voltage is the name for the electric force that causes electrons to flow - put simply, it is the 'strength' at which an electric force is pushed. |
| Current | Current is the flow of an electric charge - it is the 'amount' of electric force being pushed |
| Electrons | Electrons are very small particles that have a negative charge of electricity and travel around the nucleus of an atom |
| Bulb | A component within a circuit that produces light when electricity flows through it |
| Motor | A motor converts electrical energy into physical movement or spinning |
| Symbol | A simply drawn image that represents components within a circuit |
| Rays | When light travels, it does so in a straight line - these are called light rays |
| Reflect | When light reflects, it 'bounces' off a surface |
| Reflectors | A material that allows light to reflect light well such as mirrors, water and aluminium foil. |
| Axis | The imaginary line running through the centre of the Earth, around which we rotate. |
| Shadow | A dark shape created when an object blocks the light |




The components of a circuit convert electrical energy into other forms. For example, into light through a bulb, into sound through a buzzer and movement through a motor.

**How do I explain the difference between voltage and current?**

Imagine a bottle filled with water. If you were to squeeze that bottle, the water would squirt from the end. The harder you push, the greater the force by which that water leaves the bottle - this is what voltage is: the force at which electricity is 'pushed'. The current can be likened to the amount of water in the bottle. The more water leaving the bottle, the greater the current. (And the person who squeezed the bottle is acting as the power source, or the battery)



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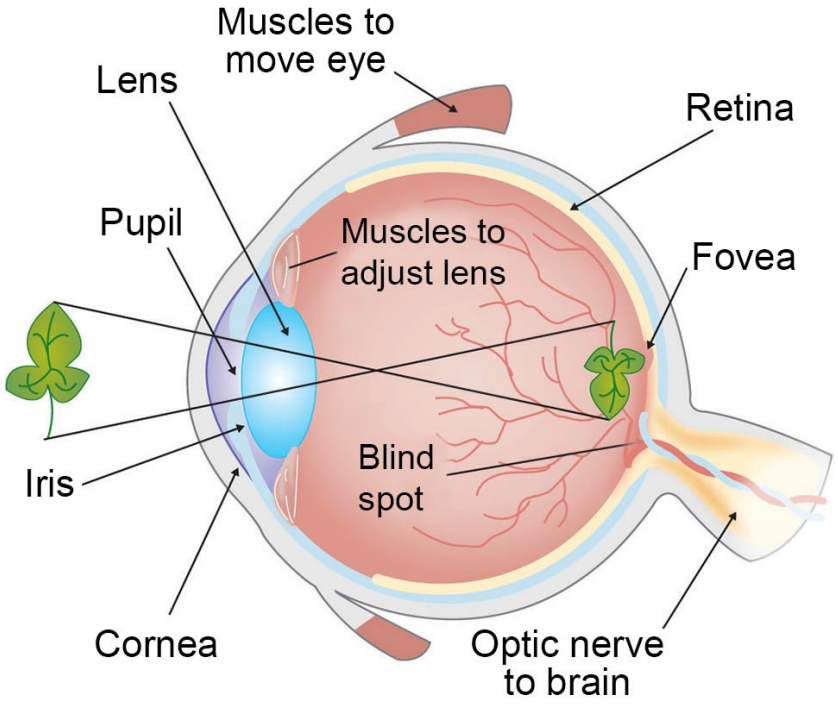
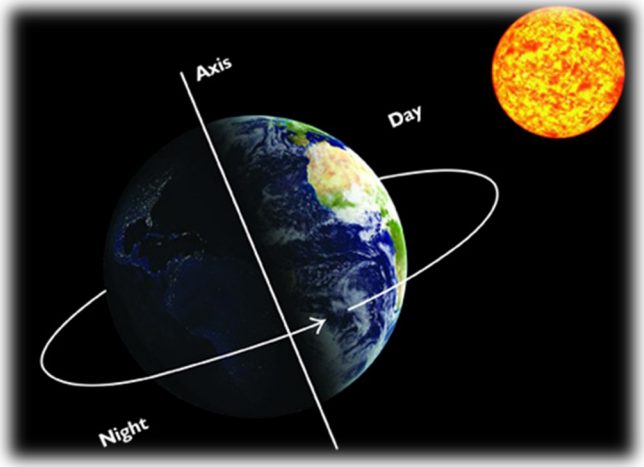
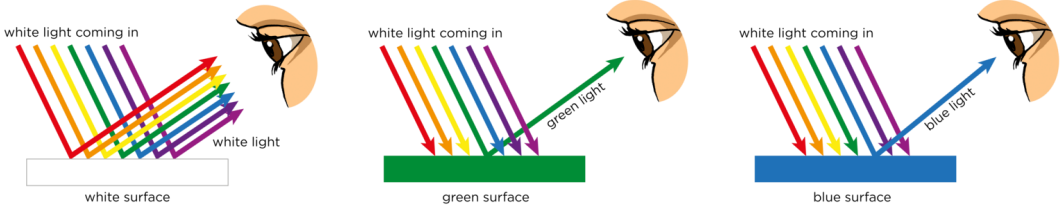



We are able to see because light rays reflect off objects and into our eyes. Because light travels in straight lines, when the light from that image hits the back of eye (the retina), the image is in fact upside-down. It is our brain that reverts it back to its correct position once sent there by the optic nerve.

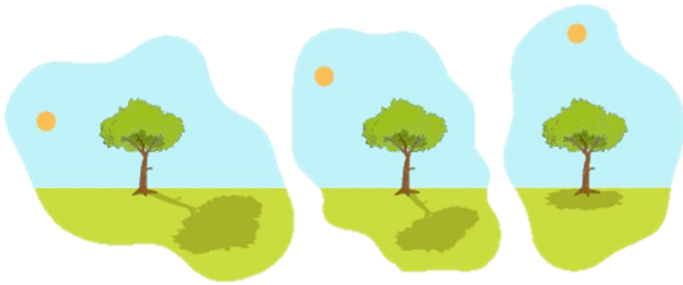
**IMPORTANT!**
**Light travels into the eye, not the other way round!**




As light from the Sun falls on the Earth, the half that is facing the Sun experiences day while the other half that is facing away from the Sun is placed in shadow - night.




Light consists of all colours of the rainbow however we do not see this. When light reflects off a blue object, it is only the blue light that is actually reflecting and entering our eyes - al the other light rays are being absorbed by that object. Objects that appear green do so because they are only reflecting green light. White objects reflect al colours.



During the daytime, the Sun appears to move through the sky - this is because the Earth is rotating on its axis and it is us that is moving, not the Sun. This also creates shadows that change throughout the day as the Sun appears in different places in the sky.