Year Six Light

Autumn 1

Space does not have any light. If our Earth didn't have an atmosphere, the sky would be **BLACK** like outer space. We would be able to see stars in our daytime like an astronaut sees stars in space.

Unlike waves of water or sound, light does **NOT** need a medium to travel through. This means that light can travel through a vacuum.

We **NEED** light to see things. Light waves travel out from a source of light in

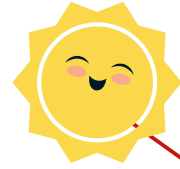
-S-T-R-A-I-G-H-T-

lines.

As light travels faster than sound, you see lightening before you hear thunder.

The speed of light equals 300,000km per second!

Light from the sun can be **dangerous** and it is important to protect the eyes.



Light from the sun travels in a straight line and hits the flowers.

The light ray is then reflected off of the flowers and travels in a straight line to the eye.

This enables the girl to see the flowers.

Objects are seen because they give out or reflect light into the eye.

A spoon in water looks like it is bent. Light b e n d s when it moves from air to water. It is called **REFRACTION**.

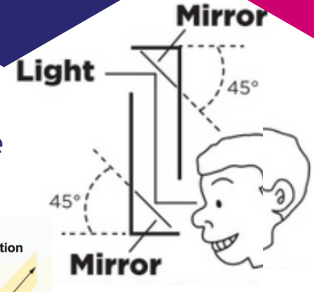
When light from an object is reflected by a surface, it changes direction. It bounces off the surface at the same angle as it hits it. This is called the **law of reflection**.

Shadows

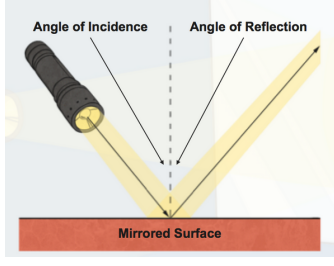
are always the same shape as the object that cast them.

When an object blocks the pathway of bright light, a shadow is formed.

A shadow can be elongated or shortened depending on the angle of the light source.



The angle of incidence is **ALWAYS** equal to the angle of reflection.



Isaac Newton shone a light through a transparent prism, separating out light into the colours of the rainbow

- the colours of the **SPECTRUM**

All the colours together merge and make make visible white light.

Glossary

Absorption - when light stops at the object and does not reflect or refract e.g. wood

Incident ray - a ray of light that hits a surface

Light - a type of energy that enables us to see

Light source - an object that produces light

Opaque - describes objects that do not let any light pass through them

Periscope - a tube with mirrors which enables you to see around corners

Reflected ray - a ray of light thats has bounced back after hitting a surface

Refract - to change the course of light passing from one medium to another

Shadow - an area of darkness where light has been blocked

Spectrum - range of colours that can be found in a rainbow or when white light is split up

Transparent - describes objects that let light travel through them

Translucent - describes objects that let some light through them