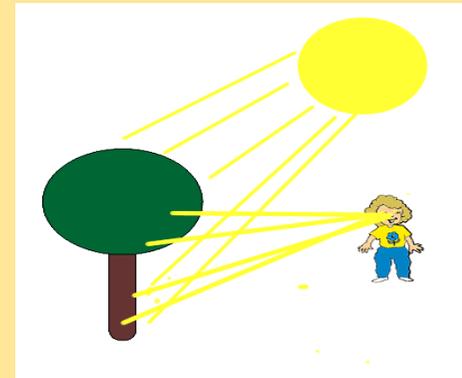


## Light Year 6

Key vocabulary	<b>Prior Learning: children will have learnt reflective surfaces and shadows from Year 3.</b>
Light	A form of energy that travels from a source in waves.
Light source	An object that makes its own light.
Incident ray	A ray of light that hits a surface.
Reflected ray	A ray of light that has bounced back after hitting a surface.
The law of reflection	The angle of the incidence ray is equal to the reflected ray.
Refraction	Light that bends when it passes through one medium to another.
Visible spectrum	Light that is visible to the human eye.
Prism	A solid 3-D shape that separates visible light into the colours of the spectrum.
Shadow	An area of darkness where a light has been blocked.
Periscope	A device which allows you to see around or through objects that aren't in your direct sight line.
Transparent	An object which light can pass through.
Translucent	An object which is light can partially pass through.
Opaque	An object which light cannot pass through.

Light is a form of energy that allows you to see things. Light waves travel from sources of light and travel in straight lines. These are often called rays or beams of light.

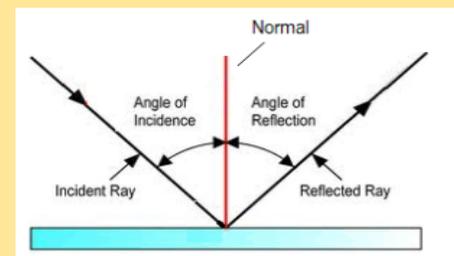
The light waves from the sun travel in straight lines and hit the surface of the tree. This is the **incident ray**.



The sun is the light source because it makes its own light.

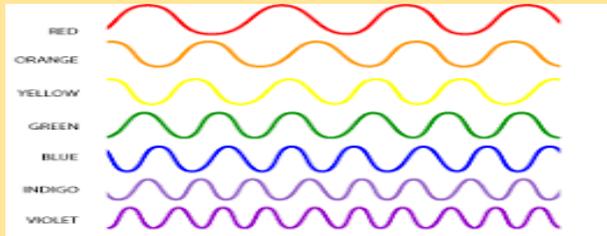
The light then bounces off the tree and travels in straight lines, allowing you to see it. This is the **reflected ray**.

When light travels, the angle of incidence will Always be equal to the angle of reflection. Whenever a light is reflected from a surface, it will always obey this law.



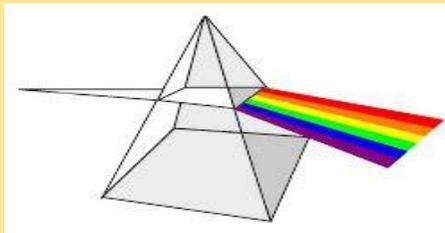
## Light Year 6

Light travels as waves. It is different to a sound wave because it can pass through a vacuum, which is a complete airless space.



White light is a mixture of all colours of light.

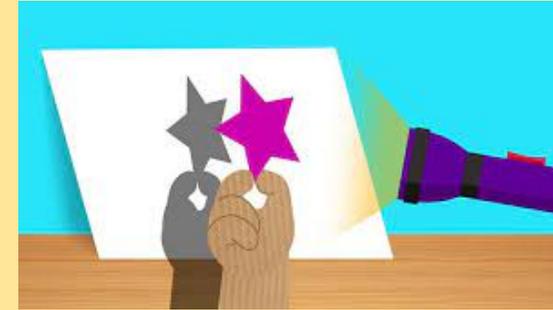
This mixture can be split into different colours using a prism which is a transparent block. The light passing through bends and the colours split apart, forming a rainbow of colours.



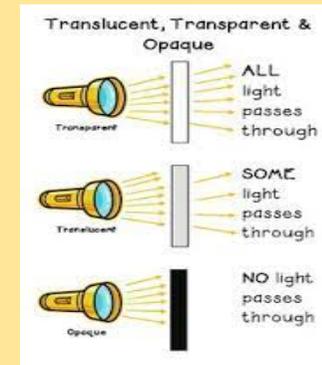
Light bends when it moves from air to water. This is why the spoon looks like it is bent. When light moves from one medium to another, it will bend. This is known as refraction.



Because light travels in straight lines, it will create shadows which are the same shape as the objects that cast them.



Shadows form when travelling through opaque or non-transparent objects. This is because they block light from passing through and reaching the surface on the other side.



Shadows will appear differently depending on how close the light source is and the angle of it.

