

What did we learn before: Year 1 - Science - Our 5 senses and parts of our bodies.

Key knowledge by subject

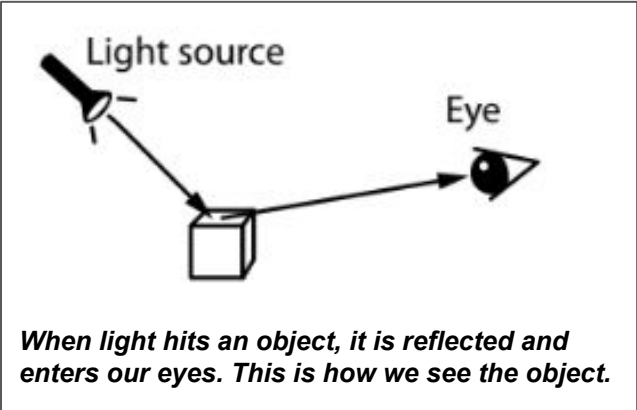
SCIENCE

Light

A **light** source makes its own light. The sun, fires, torches and lamps are all examples of light sources.

We see a light source when light from it enters our eyes.

Light travels in straight lines.



Smooth, shiny surfaces **reflect** light well (**mirrors** and polished metal).

Dull and dark surfaces do not reflect light well (black cloth).

Shadows

Glass is an example of a **transparent** material.

Tissue paper is an example of a **translucent** material.

Wood is an example of an **opaque** material.

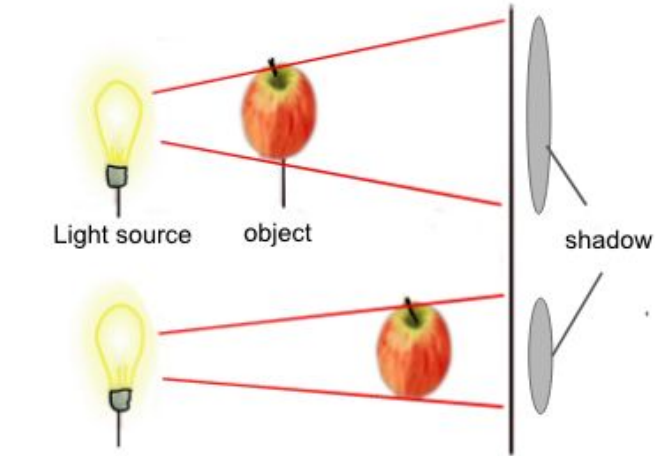
A **shadow** is made when an object blocks light from a light source.

Transparent objects do not make a shadow.

Opaque objects make a dark shadow.
Translucent objects make fainter shadows.

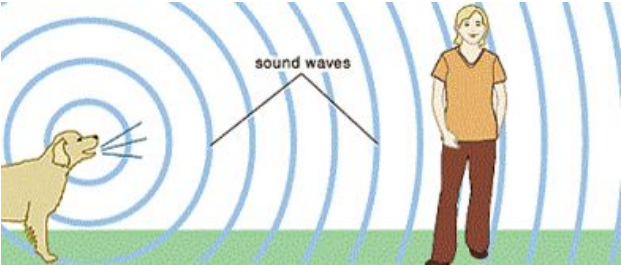
If an object is moved closer to the light source, the shadow gets bigger.

If an object is moved further away from the light source, the shadow gets smaller.



Key vocabulary

Light	Light is what makes things visible.
Reflect	When light changes direction after hitting a surface.
Transparent	Transparent objects let light pass through; you can see through them.
Translucent	Translucent materials let some light pass through them but you cannot see clearly through them.
Opaque	An opaque materials let no light pass.
Shadow	Formed when light is blocked by an opaque object.
Mirror	A mirror reflects light.
Eye	The organ which humans see through.
Pupil	Black part of the eye which lets light in.
Lens	This focuses light onto the retina.
Optic Nerve	Carries messages from retina to the brain.
Retina	Light-sensitive layer at the back of the eye.
Iris	Coloured circle around the pupil. It controls the size of the pupil.

Key knowledge (continued)		Key vocabulary	
Sound Sounds are made when objects vibrate. The vibrations make the air around vibrate and the air vibrations enter the ear which you hear as sound.  Vibrations from sounds can travel through many different materials: solids (metal, stone, wood), liquids (water) and gases (air). Sound cannot travel through a vacuum. If there is a vacuum between an object making sound and the ear, the sound will not be heard. Stronger vibrations make a louder sound and soft vibrations make a quieter sound. A sound gets fainter as you move further away from the sound source. The high sound has a high pitch and a low sound has a low pitch.	The Ear There are 3 main parts to the ear: the outer ear, the middle ear and the inner ear. The outer ear directs the sound waves into the eardrum.  The middle ear has 3 tiny bones which vibrate when the sound waves move through them. Sound waves pass from the eardrum and through these bones and into the cochlea. The cochlea is in the inner ear. There is fluid inside and the vibrations move through it and then nerves send messages to the brain.	Sound Sound is created when something vibrates and sends waves of energy into our ears. Sound wave Formed by objects vibrating. They travel through air, water, and solid objects as vibrations. Vibration A wave of energy; when something moves quickly backwards and forwards. Vacuum An space with nothing in it, not even air. Pitch The quality of a sound, depends on the rate of vibrations producing it. Ear The organ by which humans hear sound. Outer ear Directs the sound waves into the eardrum. Inner ear Has 3 tiny bones which vibrate when the sound waves move through them. Cochlea Changes sounds into nerve messages and sends them to your brain. Anvil, hammer and stirrup Amplify the sound or make it louder. Eardrum A thin sheet that vibrates when the sound hits it.	