Light

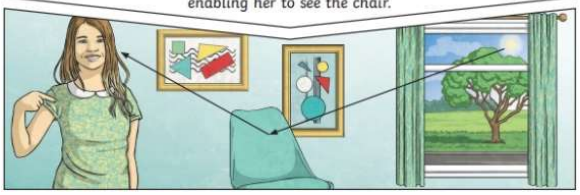
Unit Vocabulary – Join them up with the correct definition once you have learned it,

reflection	Light that is visible to the human eye. It is made up of a colour spectrum
incident ray	A ray of light that has bounced back after hitting a surface.
reflected ray	A ray of light that hits a surface.
Law of reflection	This is when light bends as it passes from one medium to another.
refraction	When light bounces off a surface, changing the direction of a ray of light.
visible spectrum	The angle of the incident ray is equal to the angle of the reflected ray.

Key Knowledge

We need light to be able to see things. Light waves travel out from sources of light in straight lines. These lines are often called rays or beams of light.

Light from the sun travels in a straight line and hits the chair. The light ray is then reflected off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.

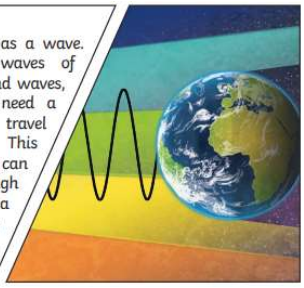


Isaac Newton shone a light through a transparent prism, separating out light into the colours of the rainbow (red, orange, yellow, green, blue, indigo and violet) - the colours of the spectrum. All the colours together merge and make visible light.

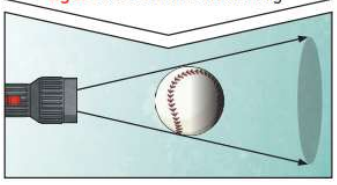
Key Knowledge

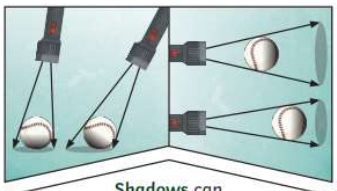
The spoon in this water looks as if it is bent. This is because light bends when it moves from air to water. When light bends in this way, it is called refraction.

Light travels as a wave. But unlike waves of water or sound waves, it does not need a medium to travel through. This means light can travel through a vacuum - a completely airless space.



A shadow is always the same shape as the object that casts it. This is because when an opaque object is in the path of light travelling from a light source, it will block the light rays that hit it, while the rest of the light can continue travelling.



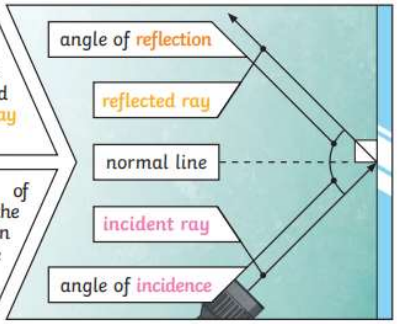


Shadows can also be elongated or shortened depending on the angle of the light source. A shadow is also larger when the object is closer to the light source. This is because it blocks more of the light.

The law of reflection states that the angle of incidence is equal to the angle of reflection. Whenever light is reflected from a surface, it obeys this law.

The angle of reflection is the angle between the normal line and the reflected ray of light.

The angle of incidence is the angle between the normal line and the incident ray of light.



Scientific Enquiries

1. Fill in learning questions