



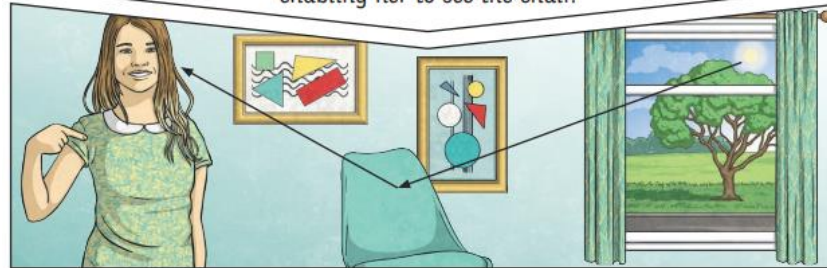
#### Vocabulary:

<b>light</b>	A form of energy that travels in a wave from a source.
<b>reflection</b>	Reflection is when light bounces off a surface, changing the direction of a ray of light.
<b>incident ray</b>	A ray of light that hits a surface.
<b>reflected ray</b>	A ray of light that has bounced back after hitting a surface.
<b>the law of reflection</b>	The angle of the incident ray is equal to the angle of the reflected ray.
<b>refraction</b>	When light bends as it passes from one medium to another.
<b>visible spectrum</b>	Light that is visible to the human eye. It is made up of the colour spectrum.
<b>prism</b>	A prism is a solid 3D shape with flat sides. The two ends are an equal shape and size. A transparent prism separates out visible light into all the colours of the spectrum.

#### 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**.

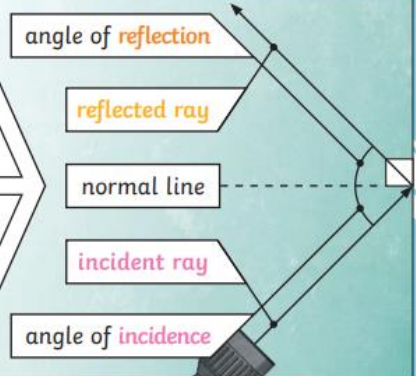
**Light** from the sun travels in a straight line and hits the chair. The **light** ray is then **reflected** off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.



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** **light**.

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

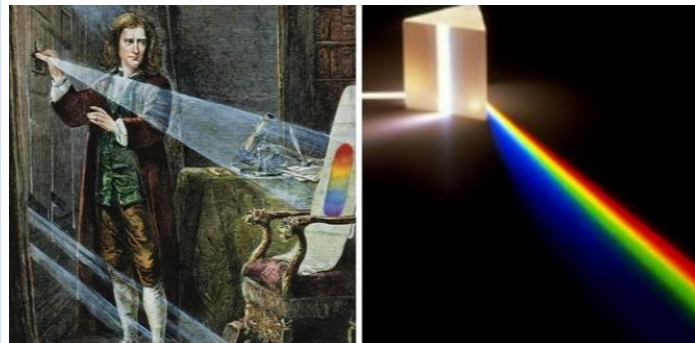
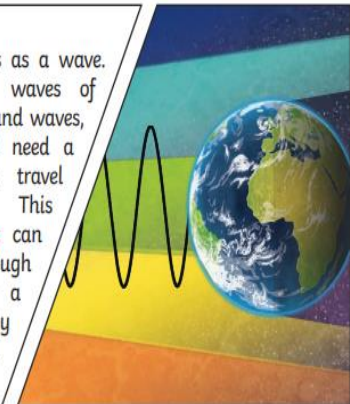


#### Key Knowledge



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.



Isaac Newton (1643 – 1727) shone a light through a transparent prism, separating light out into the colours of the rainbow (red, orange, yellow, green, blue, indigo and violet) known as the colour spectrum. The colours merge together and create light. Isaac Newton also discovered the law of gravity and the 3 laws of motion.