

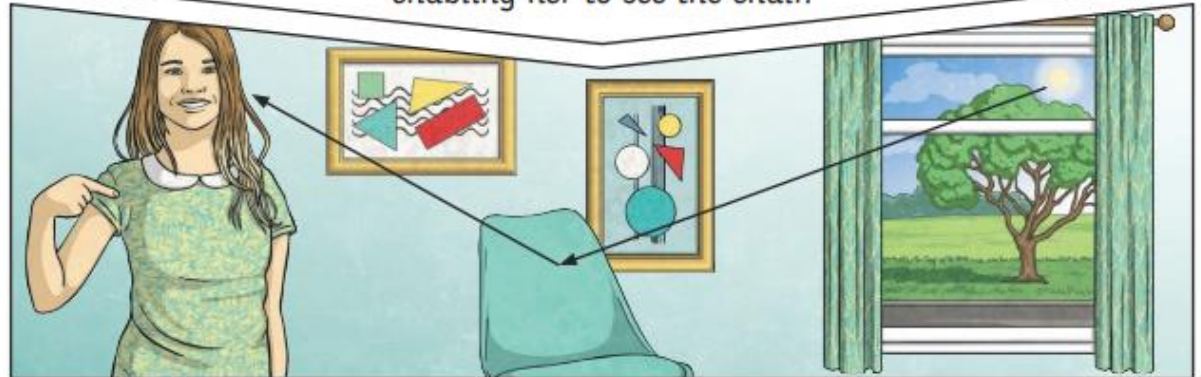
Key Vocabulary

light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light .
reflection	Reflection is when light bounces off a surface, changing the direction of a ray of 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 law states that 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**.

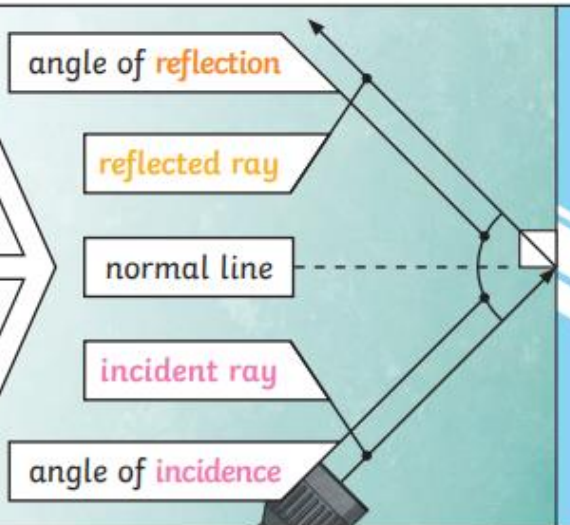
Light from the sun travels in a straight line and hits the chair. The **light** ray is then **reflected** off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.



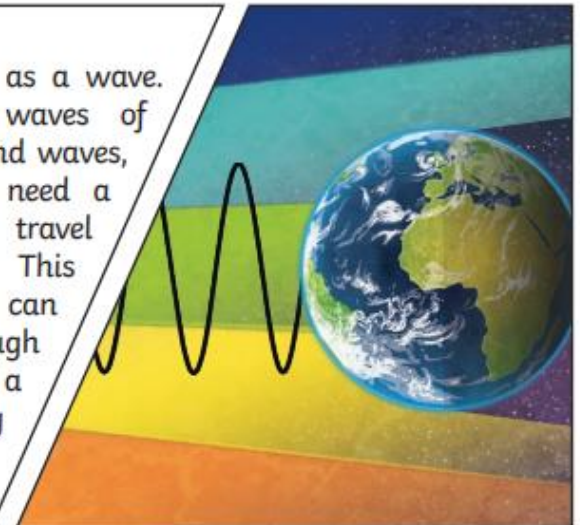
The **law of reflection** states that the angle of **incidence** is equal to the angle of **reflection**. Whenever **light** is **reflected** from a surface, it obeys this law.

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

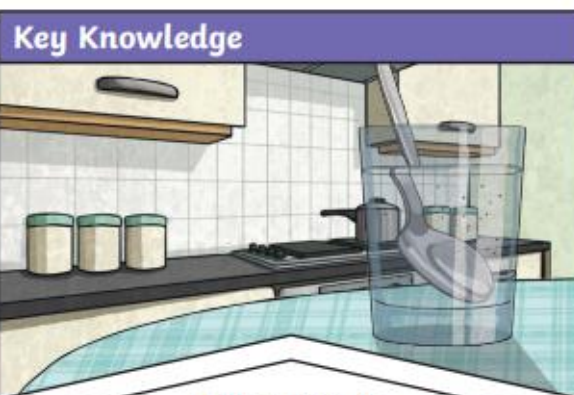
The angle of **incidence** is the angle between the normal line and the **incident ray of light**.



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.

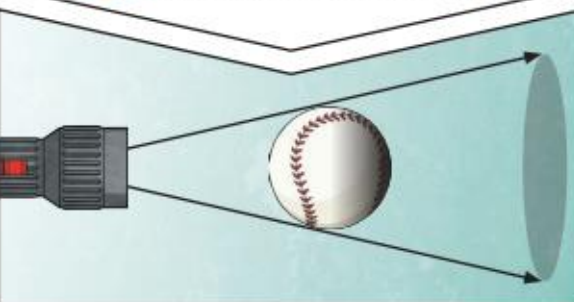


Key Vocabulary	
refraction	This is when light bends as it passes from one medium to another. E.g. Light bends when it moves from air into water.
visible spectrum	Light that is visible to the human eye. It is made up of a colour spectrum .
prism	A prism is a solid 3D shape with flat sides. The two ends are an equal shape and size. A transparent prism separates out visible light into all the colours of the spectrum .
shadow	An area of darkness where light has been blocked.
transparent	Describes objects that let light travel through them easily, meaning you can see through the object.
translucent	Describes objects that things let some light through, but scatters the light so we can't see through them properly.
opaque	Describes objects that do not let any light pass through them.

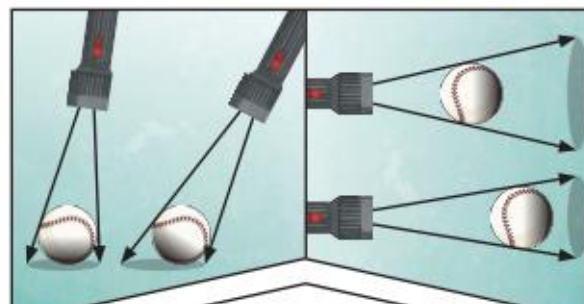


The spoon in this water looks as if it is bent. This is because **light** bends when it moves from air to water. When **light** bends in this way, it is called **refraction**.

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.



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**.



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**.

To look at all the planning resources linked to the Light unit, [click here](#).

Key Vocabulary

trade	Buying and selling goods and services.
import	Goods or services purchased from one country and brought into the UK.
export	Goods or services made in the UK and sold to another country.
goods	Items that can be bought and sold. Sometimes they are called products.
global	Around the world.

What Does the UK Trade?

The UK **trades** a lot of **goods** and services. Some of the **goods** the UK **exports** are: scrap iron, whisky, tartan kilts, medicines, aircraft parts, cars, computers, oil and gas.

Some of the **goods** the UK **imports** are: coffee beans, bananas, medicines, aircraft parts, cars, computers, oil and gas.



Trading with El Salvador

El Salvador is located between the equator and the Tropic of Cancer. The climate there is hot and humid with very heavy rainfall at times. There are some very mountainous areas.

There are some issues in El Salvador. The rocky, steep landscape can make growing crops tricky. Growing the same crops every year also means that disease can spread more easily and lead to a poor harvest. In the dry season, water can be very hard to get.



Goods imported from El Salvador include coffee, cotton, sugar, shrimp, fruit and nuts.

Key Vocabulary

fair trade	A way of buying goods designed to make sure that the producers of these goods in developing countries are paid a fair and stable price for the goods that we buy from them.
globalisation	The spread of trade and ideas worldwide.
global supply chain	The different places a product and its parts come from, and travel to, on its way to the consumer (the person who is buying the product).
multinational	Something that operates in more than one country. A multinational business is based in more than one country.
economy	The word used to explain how money is made and spent in a particular area. This could be within a country or across the world.

How Does Fair Trade Work?

There are many steps involved in selling **goods**. Bananas, for example, are generally grown on plantations. This means the plantation owner has to make sure that the ground is taken care of and fertilized. They also have to pay for fruit pickers to harvest the fruit and for machinery for the plantation. **Exporters** then transport the bananas by ship and pay for their own fuel, any lost or damaged stock and port fees. **Importers** then transport the bananas from the port to ripening centres and pay for workers and transportation to move them. The ripening centres have to pay for their operating costs, gases used for ripening and staff. Finally, the retailer sells the bananas but also pays for staff to work in shops, advertising and the costs of any stock that goes off or isn't sold. There are lots of steps in the trade process but people involved are not always paid equally or fairly. **Fair trade** exists to make sure that people are not exploited. Look out for the **fair trade** logo when buying things so that you know that people have been paid fairly for their work

How Has Trading Changed through History?

Trade has changed a lot through history. This is partly due to developments in transportation but also due to the changing relationships of the UK with other countries. In Tudor times, the UK **traded** with the Americas, whereas in Victorian times, the UK mainly **traded** with other countries who were in the British Empire

The Global Economy

Globalisation has meant that more and more **goods** travel around the world before being sold in a shop. Sometimes, parts of a product are made in several different countries before being assembled in another one. Many companies are now recognised worldwide. These are **multinational** companies and they can have both a positive and a negative impact on society. Positives may include the creation of new jobs for people. Negatives may include greater damage to the environment (due to differences in the safety rules and environmental standards of different places).