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**

A form of energy that travels in a wave rom a source.

**light**

**Key Knowledge**

**Key Vocabulary**

**Mary Dean’s Year 5/6**

An object that makes its own **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.

**light source**

**Reflection** is when **light** bounces off a surface, changing the direction of a ray of **light.**

**reflection**

**incident ray**

A ray of **light** that hits a surface.

A ray of **light** that has bounced back after hitting a surface

**reflected ray**

**the law of reflection**

The law states that the angle of the **incident ray** is equal to the angle of the **reflected ray**.

**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**.

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angle of **reflection**

**reflected ray**

normal line

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

**incident ray**

v

angle of **incidence**

Describes objects that let **light** travel through them easily, meaning you can see through the object.

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.

Describes objects that do not let any **light** pass through them.

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.

**Light** that is visible to the human eye. It is made up of a colour **spectrum**.

The spoon in

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

**opaque**

Describes objects that let some **light** through, but scatters the **light** so we can’t see through them properly.

**transparent**

**translucent**

An area of darkness where **light** has been blocked.

**shadow**

**visible 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**.

This is when light bends as it passes from one medium to another. E.g **Light** bends when it moves from air into water.

**refraction**

**Key Knowledge**

**Key Vocabulary**

**Mary Dean’s Year 5/6**

**Light**