

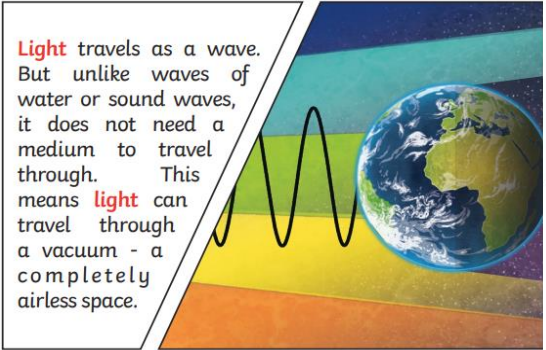
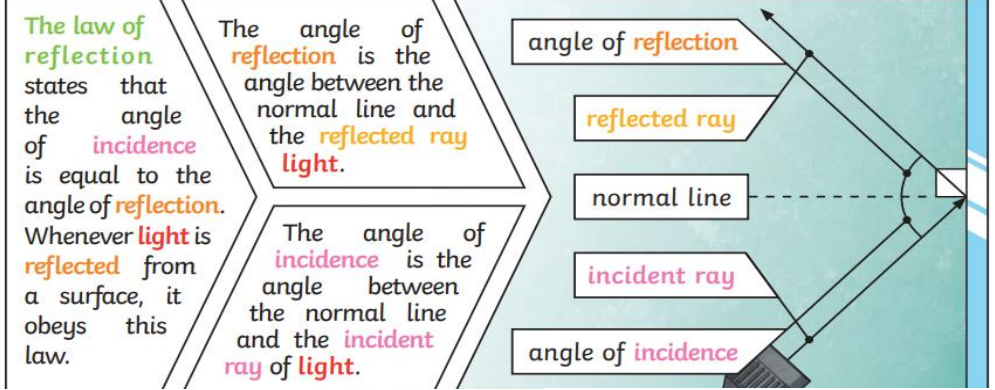
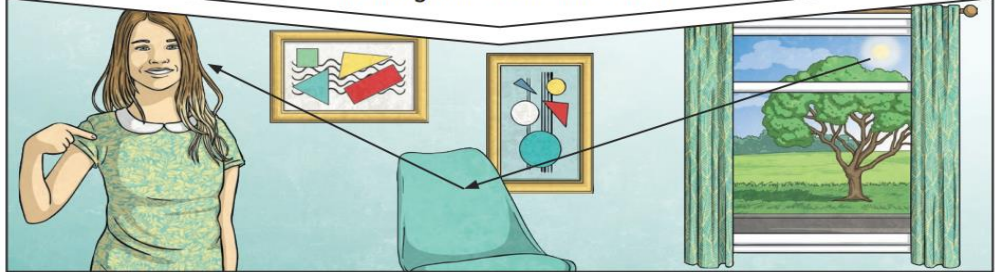


Otters Class UKS2 – Autumn 2 – Science Knowledge Organiser – Light

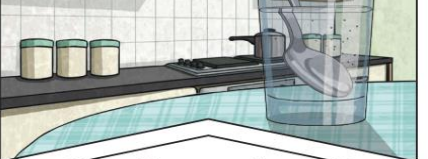
| Key Vocabulary | |
|------------------------------|---|
| light | A form of energy that travels in a wave from a source. |
| light source | An object that makes its own light . |
| reflection | Reflection is when light bounces off a surface, changing the direction of a ray of light . |
| incident ray | 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 . |
| 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. |

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.

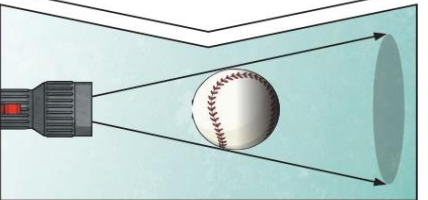


Key Knowledge

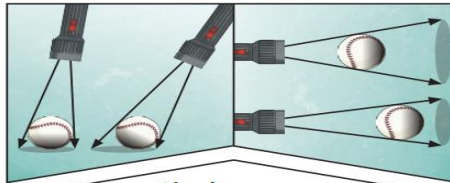


The spoon in this water looks as if it is bent. This is because **light** bends when it moves from air to water. When **light** bends in this way, it is called **refraction**.

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**.

