#### Did you know?

. The reason you can see lightning before you can hear thunder, is because light travels faster than sound. So the sound of thunder is actually

# Light

Year 6 Autumn Term







# 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.   |
| filter       |          | Pass through a device to remove unwanted material (liquid, gas, light or sound)   |
| periscope    | <b>≟</b> | An apparatus consisting of a tube of attached to a set of mirrors or prisms through which a observer can see things that are otherwise out of sight |
| rainbow      |          | An arch of colours visible in the sky, caused by the refraction and dispersion of the sun's light by rain or other water droplets in the atmosphere |
| refraction   |          | The bending of light as it passes from one substance to another with the bending caused by the difference in density between two substances         |
| spectrum     |          | A band of colours, as seen in rainbows, produced by separation of the components of light by their different degrees of refraction                  |
| shadow       |          | The dark shape made when something blocks light from a light source like the sun  |

#### Why do we need light?



We need light to be able to see things. Light waves travel out from sources of light in straight lines.

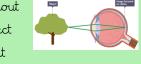
These lines are often called rays or beams of light.

### Did you know?

If you travelled at the speed of light, you could travel around the Earth 7.5 times every second!

#### How do we see? We see objects

because they give out light or they reflect light from a light



source (Natural / Artificial) into your eyes. Inside the eye is a lens which focuses the light onto a surface at the back of the eyeball. This surface is called the retina and is made up of special cells which detect light and send messages to our brain. The message passed from the retina to your brain is the image you see.

## Significant People



Although Newton is best known for his work on gravity, did you know he identified that light is made up of a spectrum of colours. He did this by refraction of white light through a prism and saw that different colours of light passed through.

### Refraction



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**.