

Year 6

Science: Light

Spring Term

Key Facts

What is Light?

Something that stimulates your sight and makes things visible.

What is a light source?

Something that provides light, whether it be natural (the Sun) or artificial (a Torch).

What is a shadow?

A dark area or shape produced by an object in between a ray of light.

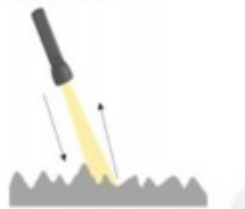
Reflection:

When light from an object is reflected by a surface, it changes direction. It bounces off at the same angle it hits it. Smooth, shiny surfaces such as mirrors and polished metals reflect light well. Dull and dark surfaces such as dark fabrics do not reflect light well.

Example: light travelling and reflecting from a smooth surface.



Example: light travelling and reflecting from a rough surface.



Key Vocabulary

Eyes: Globular organs of sight in the head of humans and vertebrate animals

Filter: Pass through a device to remove unwanted material (liquid, gas, light or sound)

Periscope: An apparatus consisting of a tube of attached to a set of mirrors or prisms through which an 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

Reflection: The throwing back by a body or surface of light, heat or sound without absorbing it

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

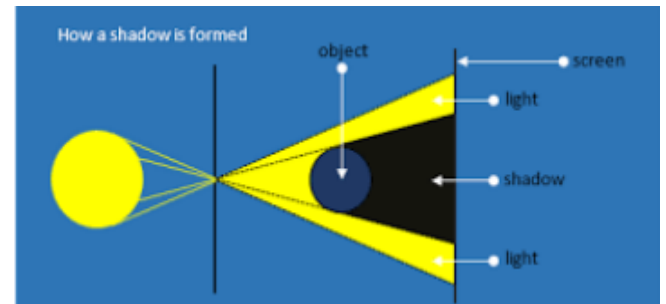
Opaque: you cannot see through it

Transparent: you can see through it

Translucent: some light can pass through it

Shadows:

Light travels in straight lines. This leads to shadows being formed because, if an object is in the way, the light will move in a straight line past it rather than surrounding it. The shadows shape will be the same as the object which has blocked the light. The size of the shadow changes as the light source moves, the further away from the light source the smaller the shadow is and the closer the light source is to the object the bigger the shadow. The angle of the light source also makes a difference to the size of the shadow.



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.