

Science – Bright Ideas

Key Vocabulary

Eyes - Organs of sight in the head of humans and vertebrate animals

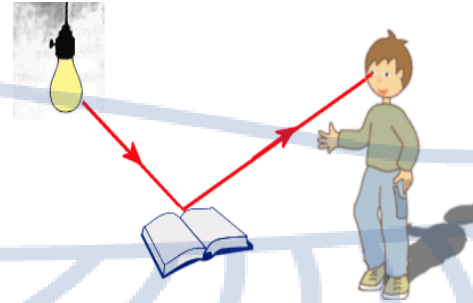
Filter - Pass through a device to remove unwanted material (liquid, gas, light or sound)

Light - The natural agent that stimulates sight and makes things visible

Light source - Something that provides light, whether it be a natural or artificial source of light (e.g. the sun, a torch)

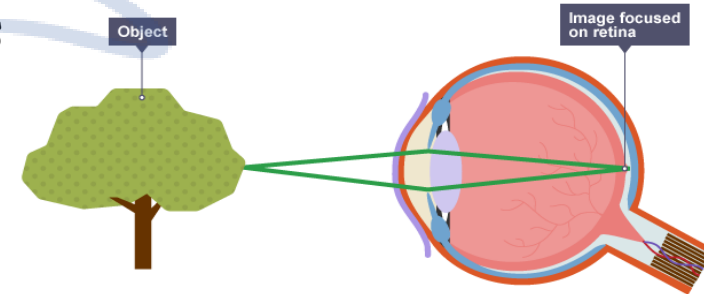
Periscope - An apparatus consisting of a tube attached to a set of mirrors or prisms through which an observer can see things that are otherwise out of sight

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



We need light to be able to see things. Light waves travel out from sources of light in straight lines. These lines are called 'rays' or 'beams' of light.

Light from the sun travels in a straight line and hits an object. The light ray is reflected off the object and travels in a straight line to your eye enabling you to see the object.



Isaac Newton shone a light through a transparent prism, separating light into the colours of the rainbow - the colours of the 'spectrum'. They merge together to make visible light.

Science – Bright Ideas

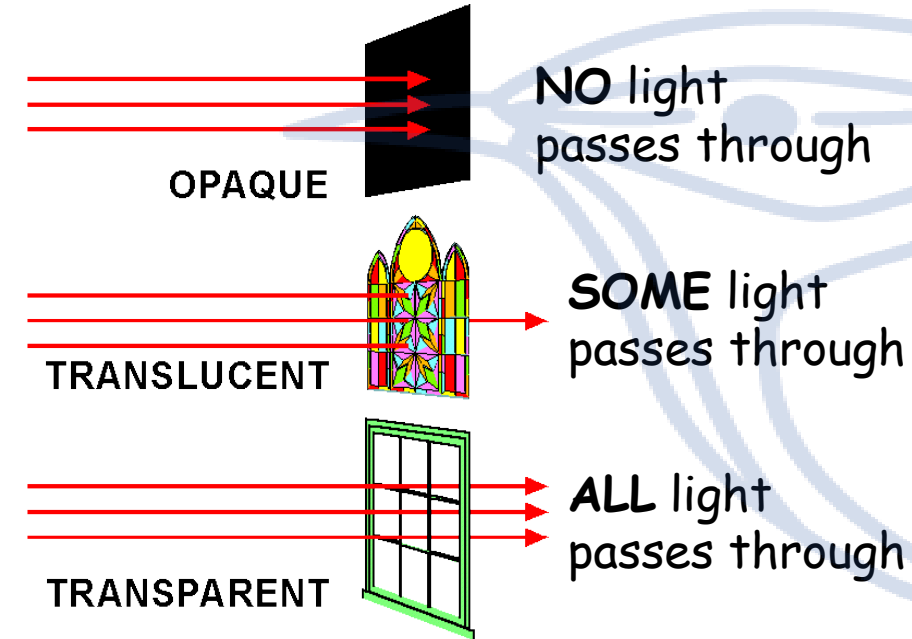
Key Vocabulary

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

Shadow - A dark area or shape produced by a body coming between rays of light and a surface

Spectrum - A band of colours, as seen in rainbows, produced by separation of the components of light by their different degrees of 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.

Can you use a torch to investigate shadow shapes?



Which of these do you think are 'natural' sources of light?

