



Topic LIGHT

Year: 6

Strand: Physics

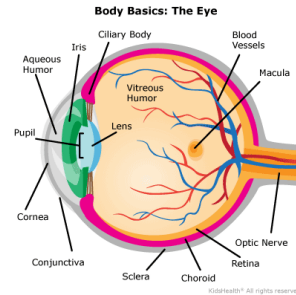
What Should I Already Know?

Main Information

Vocabulary

- Know and name a variety of sources of light, including electric lights, flames and the Sun.
- Understand that we see things because light travels from light sources into our eyes.
- Notice that light is reflected from surfaces.
- Associate shadows with a light source being blocked by something.

Our eyes have a small window at the front called a pupil, through which light can enter. The pupil looks as though it is black because it is dark inside our eyes. When it is dark, our pupils go larger, in order to let more light in so that we can see better. In bright lights, our pupils go smaller. At the back of our eye is a sensitive sheet of nerves called a retina. They can detect light when it comes in through the pupil and send messages to the brain about what we can see.



Enquiry questions:

- How does light travel?
- How do we get shadows?
- How are rainbows created?
- Are some material better than others for letting light pass through?
- How do we see?
- What job does the retina do?

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.

Diagrams

Isaac Newton shone a light through a transparent prism separating out light into the colours of the rainbow (red, orange, yellow, green, blue, indigo, violet) - the colours of the spectrum. All the colours merge together and make visible light.

