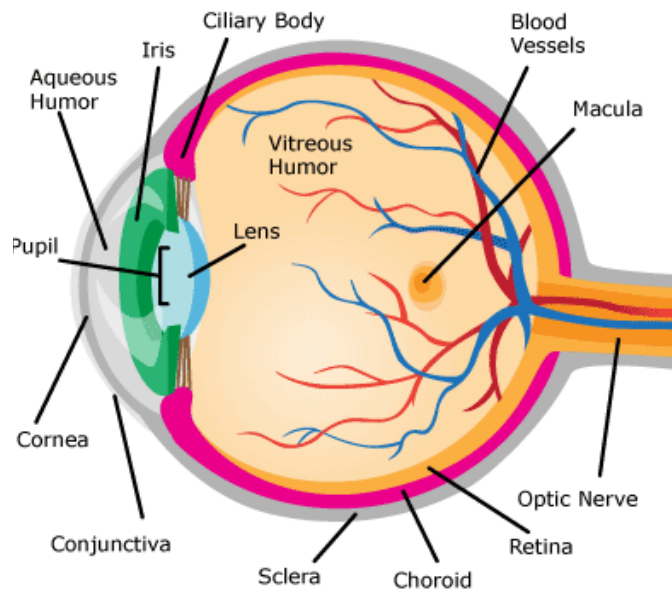
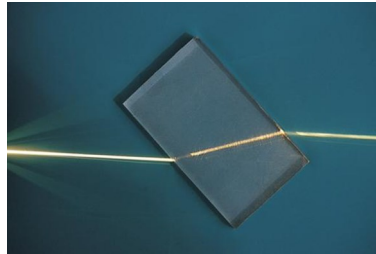


# Year 6: Light

## THE EYE:



## REFRACTION:



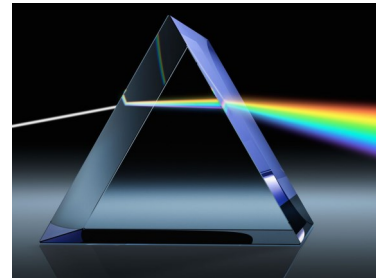
When light passes from one medium to another, it changes direction; this is called refraction.

This happens because light travels at different speeds through objects.

White light is made up of all the colours of light.

White light refracted by two surfaces in a prism will spread out to show all the colours.

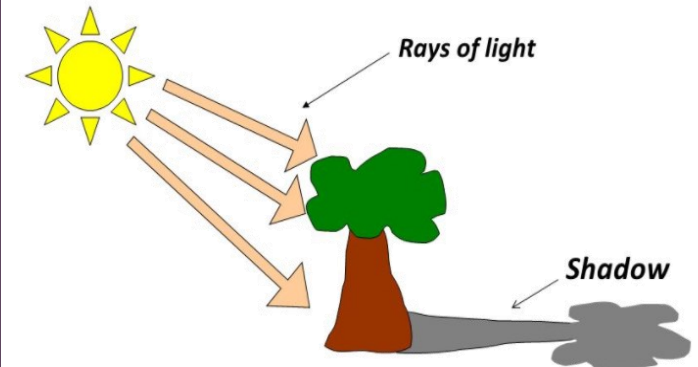
This array of colours is called the spectrum.



The different colours of light travel at different speeds.

Rainbows are created when light travels through water vapour in the air and is refracted into its full spectrum of colour.

## SHADOWS:



Shadows are formed in the shape of the object which is blocking the light.

Opaque objects block the light from passing through.

Translucent objects allow some light to pass through, so will not form a clearly defined shadow.

As some light passes through, it changes direction so the object seen will not be clearly defined.

## KEY VOCABULARY:



**ANGLE OF INCIDENCE:** the angles at which light hits a surface



**ANGLE OF REFLECTION:** the angle at which light reflects off a surface



**CORNEA:** a transparent layer covering the front of the eye



**IRIS:** the flat coloured ring around our pupil in the eye



**LENS:** the transparent, elastic structure behind the iris which focuses light on the retina so we can see clearly



**MACULA:** an oval, yellowish area near the centre of the retina which is the region of best vision.



**MEDIUM:** the intervening substance through which light can pass



**MIRROR:** a flat piece of glass which reflects light, so when you look into it, you can see yourself



**OPTIC NERVE:** transmits messages to the brain from the eye.



**PERISCOPE:** an apparatus consisting of a tube attached to a set of mirrors or prism.



**PUPIL:** the dark circular opening or hole in the centre of the iris of the eye



**RAY:** a line of light from a source



**REFLECTION:** light is sent back from the surface and does not pass through it



**REFRACTION:** light changing direction after being deflected as it passes through a substance



**RETINA:** a layer at the back of the eyeball that contains cells which are sensitive to light



**SCLERA:** the white, outer layer of the eyeball



**SPECTRUM:** a band of colours, as seen in a rainbow, produced by separating the components of light.



**TRANSLUCENT:** some light can pass through it

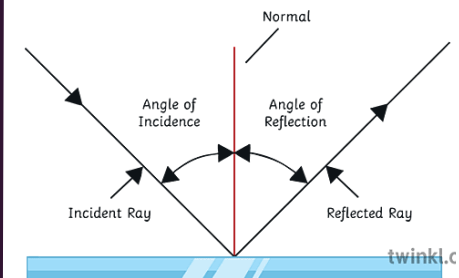


**VISION:** the state of being able to see



**VITREOUS HUMOUR:** the transparent jelly-like tissue filling the eyeball behind the lens

## ANGLES:



When light reflects off an object, the angle of incidence is equal to the angle of reflection.

This allows us to clearly see the object.

A periscope takes advantage of the predictable angles of incidence and reflection to allow an image to be shown to a viewer.