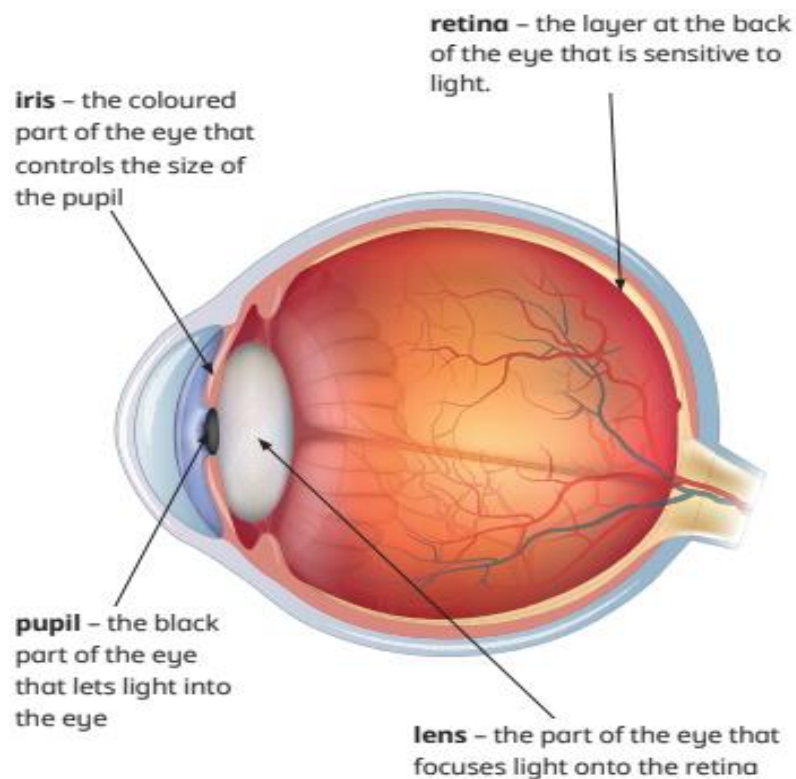


Light Knowledge Organiser



shadow – a dark area caused by an object blocking a source of light



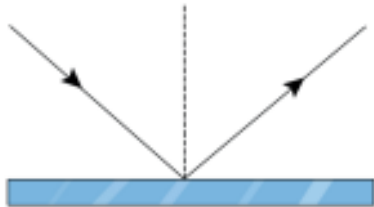
opaque – an object or material that does not allow any light to pass through it



translucent – an object or material that allows some light to pass through it



reflection – when light bounces off an object



light source – object that produces light



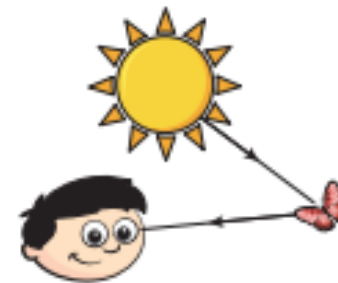
transparent – an object or material that allows all light to pass through it



solar eclipse – when the Moon passes between the Earth and the Sun and blocks the sunlight from reaching the Earth. This casts a shadow of the Moon on the Earth



ray diagram – a diagram that shows how light travels



angle – where two lines meet at a point



periscope – an instrument that uses mirrors to make objects visible around barriers

Key Knowledge	
How we see	• Luminous objects emit light and non-luminous objects do not emit light. • Humans can see objects because a light source produces light. • Light reflects from an object to the eye. • Light passes through the pupil to the retina.
Light and straight lines	• Light travels in straight lines. • Light travels from a light source to an object. • The light rays reflect from the object to the eye. • A reflection is where light rays bounce off an object.
Shadow formation	• When light rays from a light source travel to an opaque object, they cannot pass through and a shadow is formed. • The blocked light rays create an area of darkness behind the object, which is the shadow. • The shape of a shadow is determined by the shape of the object that blocks the light. • Shadows are always dark because they are areas from which light has been blocked.
Enquiry question	
How does the distance from a light source affect the size of the shadow?	
Refraction	• When light passes from one medium to another, it can change direction. This is called refraction. • Refraction happens because light travels at different speeds in different substances.
Explore light	• White light is composed of a mixture of colours. • A rainbow is a spectrum of light formed when sunlight passes through, and is refracted by, raindrops.

Knowledge Map - Light

opaque

transparent

ray diagram

translucent

shadow

reflection

light ray