

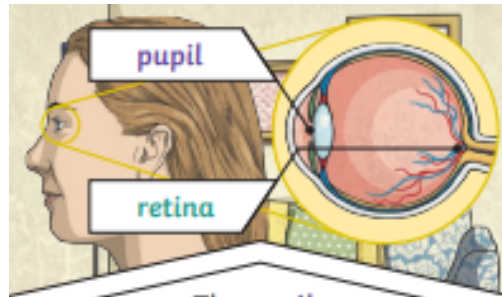


Year 3 Knowledge organiser

Autumn 2– Light and Shadows

Vocabulary

light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light .
dark	Dark is the absence of light .
reflection	The process where light hits the surface of an object and bounces back into our eyes.
reflect	To bounce off.
reflective	A word to describe something which reflects light well.
ray	Waves of light are called light rays . They can also be called beams.
pupil	The black part of the eye which lets light in.
retina	A layer at the very back of the eye. The retina takes the light the eye receives. It then changes it into nerve signals to send to the brain.
shadow	An area of darkness where light has been blocked.
opaque	Describes objects that do not let any light pass through them.
translucent	Describes objects that let some light through, but scatter the light so we can't see through them properly.
transparent	Describes objects that let light travel through them easily, meaning that you can see through the object.



The pupils

control the amount of **light** entering the eyes. If too much **light** enters, then it can damage the **retina**. To help protect the eyes, you can wear a hat with a wide brim and sunglasses with a UV rating.

A **shadow** is caused when **light** is blocked by an **opaque** object. A **shadow** is larger when an object is closer to the **light** source. This is because it blocks more of the **light**.



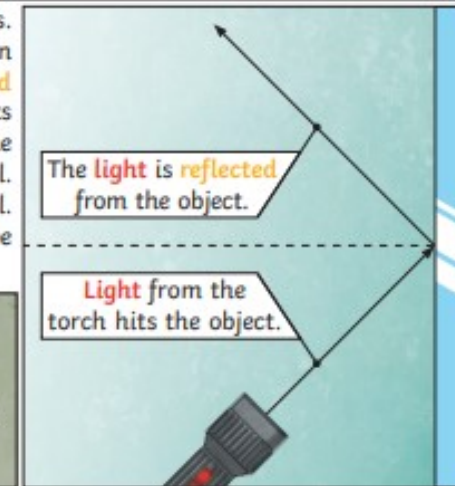
We need **light** to be able to see things. **Light** travels in a straight line. When **light** hits an object, it is **reflected** (bounces off). If the **reflected light** hits our eyes, we can see the object. Some surfaces and materials **reflect light** well. Other materials do not **reflect light** well. **Reflective** surfaces and materials can be very useful...



hi-vis jacket



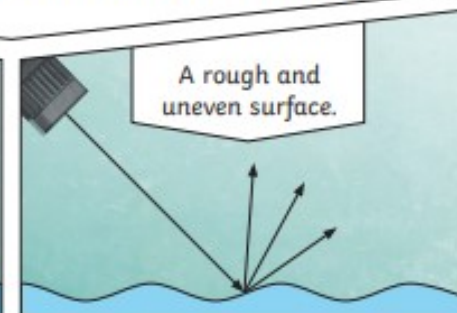
cat's eyes



The surfaces that reflect **light** best are smooth, shiny and flat.



A smooth, shiny, flat surface.



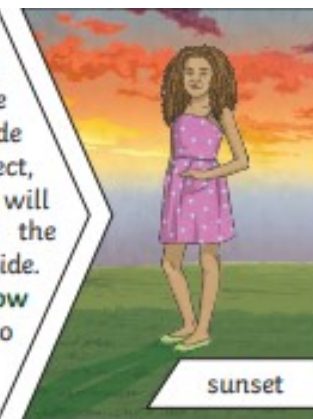
A rough and uneven surface.

When the **light** source is directly above the object, the **shadow** will be directly underneath.



midday

When a **light** source is to one side of an object, the **shadow** will appear on the opposite side. The **shadow** will also be longer.



sunset