



What should I know already?

- You need light to be able to see things.
- Light can form a shadow.
- Sunglasses help to protect our eyes when outside.

Things I need to know

-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

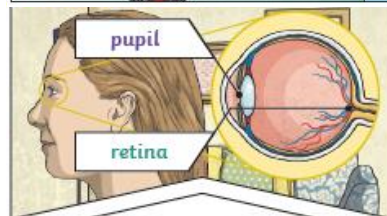
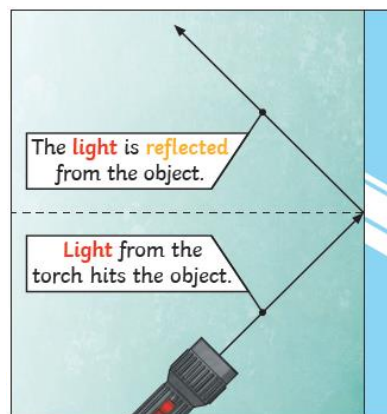


cat's eyes

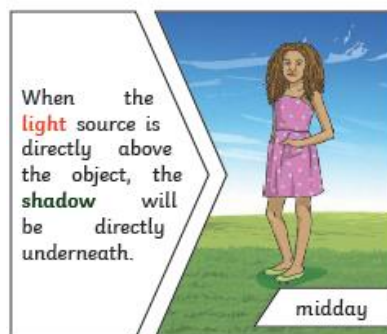
Mirrors **reflect light** very well, so they create a clear image. An image in a mirror appears to be reversed. For example, if you look in a mirror and raise your right hand, the mirror image appears to raise its left hand.



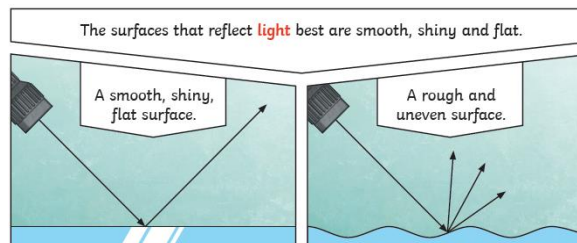
Diagrams



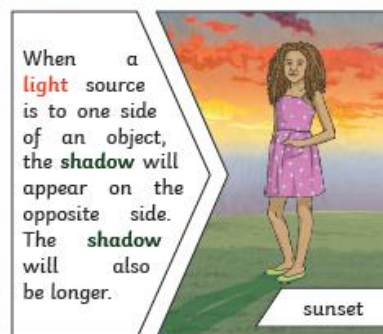
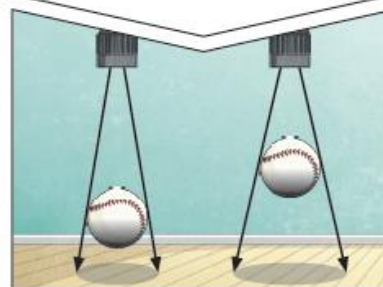
The pupils control the amount of **light** entering the eyes. If too much **light** enters, then it can damage the **retina**. To help protect the eyes, you can wear a hat with a wide brim and sunglasses with a UV rating.



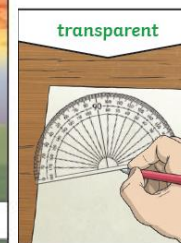
When the **light** source is directly above the object, the **shadow** will be directly underneath.



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**.



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.



Vocabulary

Dark- dark is the absence of light.

Light- A form of energy that travels in a wave from a source.

Light source- An object that makes its own light.

Opaque- describes objects that do not let any light pass through them.

Pupil- The black part of the eye which lets light in.

Ray- Waves of light are called light rays. They can also be called beams.

Reflect- to bounce off.

Reflection – The process where light hits the surface of an object and bounces back into our eyes.

Reflective- a word to describe something which reflects light well.

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.

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.

