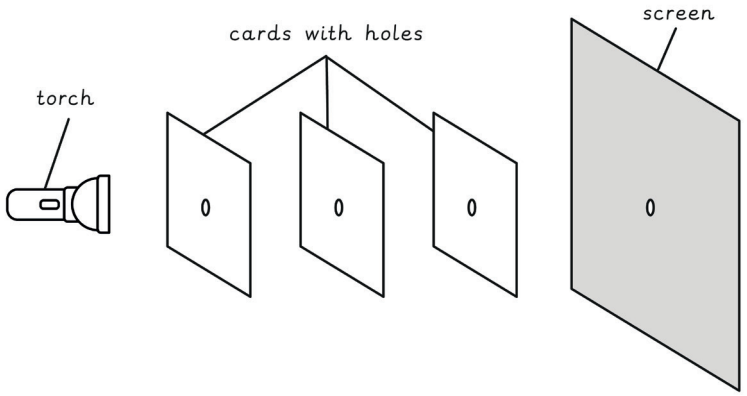
Science - Light and reflection

light	A store of energy that can be seen with our eyes.
light source	Where light comes from.
light ray	A narrow beam of light.
luminous	Something that gives off light.
non-luminous	Something that does not give off-light.
transparent	A material that allows light to pass through with minimal scattering or reflection so an object is clearly visible.
translucent	A material that allows some light to pass through. Light may be scattered, causing objects behind to appear fuzzy or distorted.
opaque	A material that blocks or absorbs all light, preventing objects on the other side from being seen.

Light travels in a **straight** line.

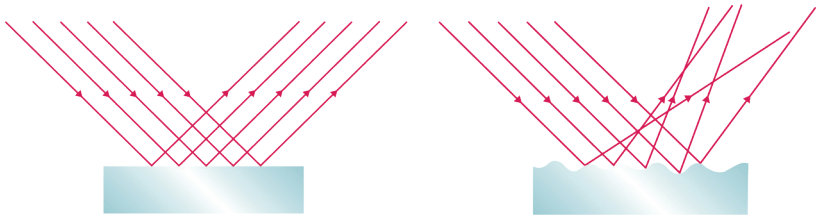
The holes must line up exactly for the light to pass through and show on the screen. This is because light cannot move around objects - it travels in a straight line.



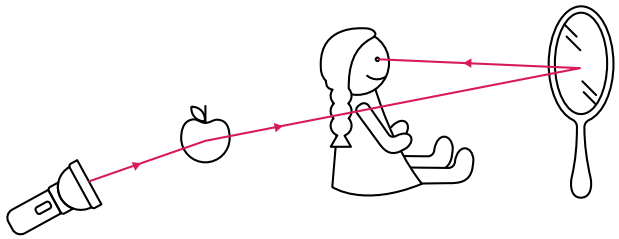
Shadow - a dark area caused by something blocking the light.

A **shadow** is formed when an **opaque** object is in the pathway of light because light travels in straight lines.
Shadows have the same shape as the objects that cast them.
The size of a shadow changes as the light source moves.

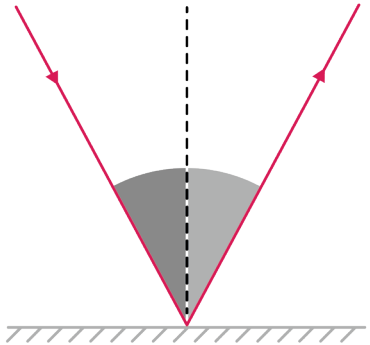
Light can change direction when it reaches a different material. **Reflection** is when light does not pass through a material and changes direction.



Shiny surfaces **reflect** light **uniformly**, whereas rough surfaces **scatter** the light rays.

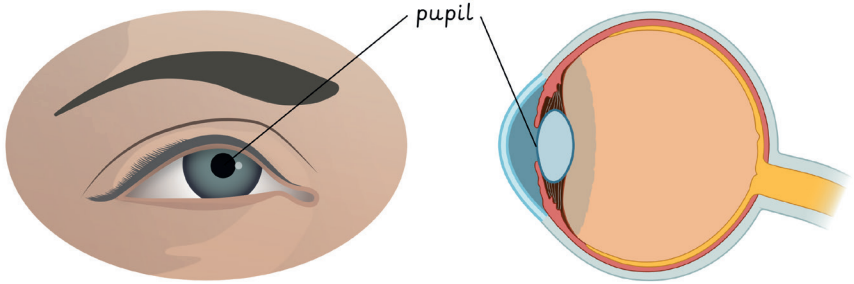


A **ray diagram** is a scientific drawing to show the pathway of light. It can be helpful to explain observations.



On a smooth surface, the angle of the **incoming ray** is the same as the angle of the **reflected ray.**

Light needs to enter the eye for us to see. It enters through the **pupil.**



Light may come directly from a **luminous** object or reflect off a **non-luminous** object.

Mirrors are useful in lots of situations:

- Looking at the back of your hair when you get it cut.
- Dentists looking at the inside of the mouth.
- Rear view and side mirrors in a car to look at your surroundings in a vehicle.

Periscopes are long, vertical tubes that contain a set of mirrors to give a view above the position of the eye.