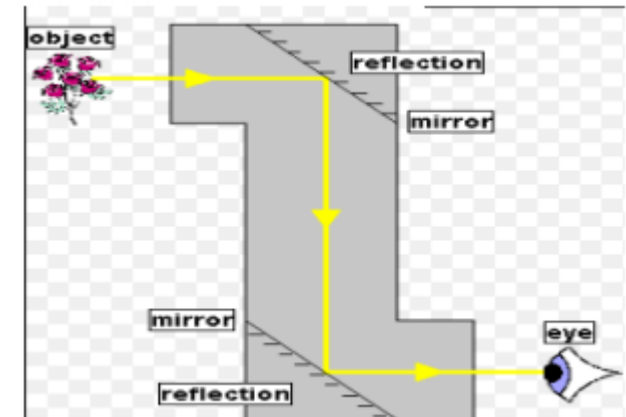


Light – Knowledge organiser.

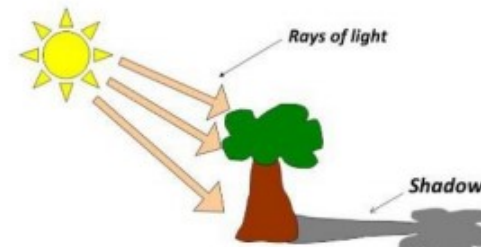
Cherry Class

Light source	Something that provides light e.g sun, torch
Natural light source	A light source that occurs naturally e.g sun, fire stars, lightning
Artificial light source	A light source that is produced by something manufactured e.g torch, headlight, lighthouse
Reflected light	Light that is bounced back to us by a reflective surface e.g mirror, moon
Reflective	To throw back light without absorbing it.
Ray	The line that light travels in from a source.
Beam	A solid shaft of light you see coming from a light source e.g car headlights/ torch
Shadow	Dark area or shape on a surface produced by something opaque blocking all light .
Opaque	Not able to be seen through (totally blocks all light)
Translucent	Allows some light but not detailed shapes to pass through
Transparent	Totally see through—allows light to pass through so that objects behind can be seen clearly.

Reflecting a light beam with mirrors



- Because **light** travels in straight lines, when there is an **opaque** object blocking the **light**, a **shadow** is formed.
- These **shadows** have the same shape as the objects that cast them.



Formation of shadows

- The size of a **shadow** changes as the **light source** moves.



LARGE SHADOW
when the toy is close to the light

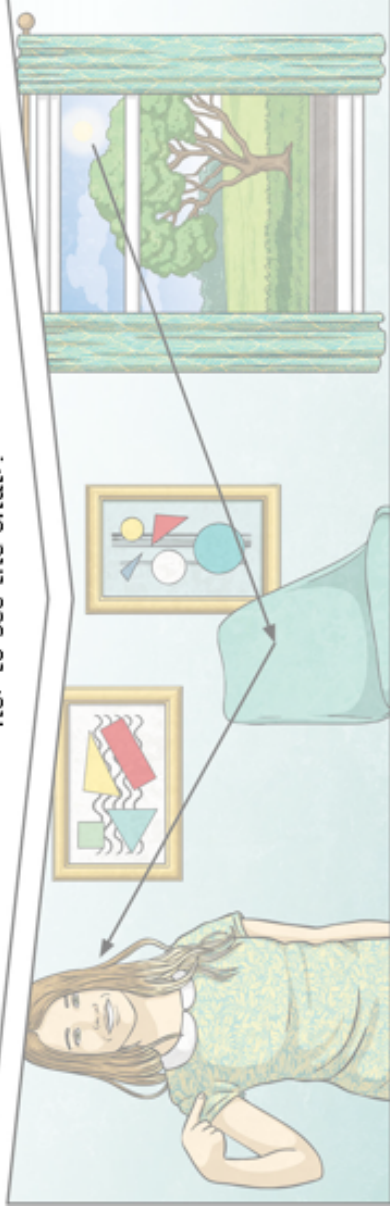
SMALLER SHADOW
when the toy is further from the light

TINY SHADOW
when the toy is a long way from the light

Key Knowledge

We need **light** to be able to see things. **Light** waves travel out from sources of **light** in straight lines. These lines are often called rays or beams of **light**.

Light from the sun travels in a straight line and hits the chair. The **light** ray is then **reflected** off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.



- Light travels in straight lines.
- A light source is something that provides light, whether it be natural or artificial (e.g the sun, a torch)
- Objects are seen because they give out, or reflect, light into the eye.
- We see things because the light travels from light sources to our eyes or from light sources to objects and then to our eyes.
- When light from an object is reflected by a surface, it changes direction. It bounces off the surface at the same angle it hits it.
- Smooth, shiny surfaces such as mirrors and polished metal reflect light well. Dull and dark surfaces such as dark fabrics do not reflect light well.
- Shadows occur when light is blocked. Shadows have the same shape as the objects that cast them.