# Light

## What you've learnt already

- that light comes from light sources and we need it to see (Y3)
- how a shadow is formed and can be changed (Y3)
- that shiny surfaces are more reflective than dull ones (Year 3 Physics – Light)
- that light from the sun can be dangerous and how to protect themselves (Y3)

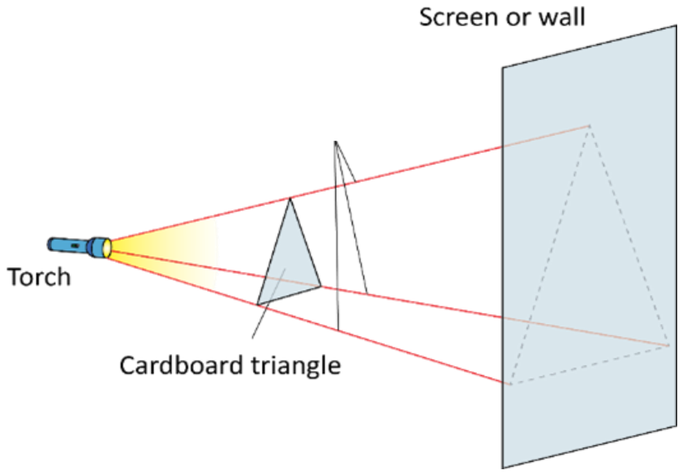
## Choices

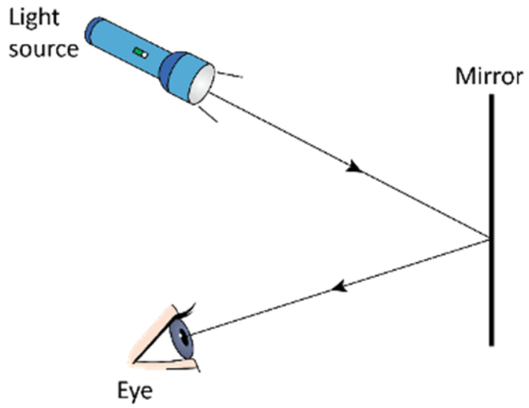
- Children choose their variables that they change throughout the investigations
- Children select the materials they would like to use in their investigations.

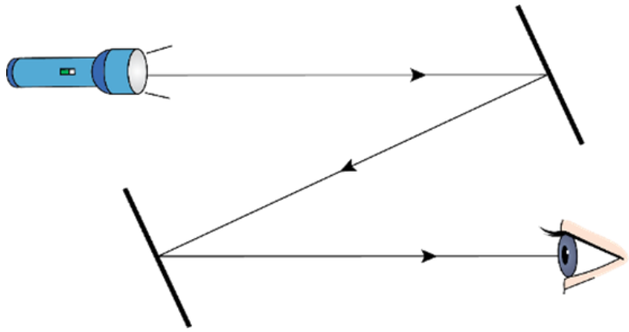
## Key Vocabulary

| | |
|---|---|
| Block | Stop; not allow to pass through |
| Dark | The absence of light |
| Light ray | A way of showing light travelling from one place to another |
| Light source | Something, natural or artificial, that produces its own light |
| Opaque | The property of blocking light by absorbing or reflecting all of the light that falls on it |
| Reflection | An image of an object seen in a mirror or other reflective surface |
| Transparent | The property of allowing almost all light that falls on it to pass through, enabling a clear view of what lies behind it |
| Translucent | The property of blocking or scattering some light so that not all of it passes through and there is no clear view of what lies behind it |
| Travel | Move from one place to another |

## Diagrams



## Lesson Sequence

| | |
|---|---|
| L1 | How does light travel? |
| L2 | What can we change about a shadow? |
| L3 | What might affect the size of a shadow? |
| L4 | What affects the size of a shadow? |
| L5 | How is light reflected? |
| L6 | How do we see objects? |

## Key Knowledge

- Light appears to travel in straight lines.
- We can see a light source because some of the light from the source enters our eyes.
- A shadow is the same shape as the object that casts it.
- The shape of shadows can be changed.
- The shape and size of shadows can change size when the relative positions of the light, object and screen are changed
- Light is reflected from shiny surfaces in a predictable way because it travels in straight lines.
- We can see objects because they reflect some of the light that falls onto them into our eyes.
- A shadow is a region of darkness or reduced light where light has been blocked by an object.
- No light can pass through an object made from an opaque material into the area behind the object, so a dark shadow is cast there
- Objects made from translucent materials cast pale shadows as they allow some of the light to pass through them.