

Key Vocabulary:

Darkness – The absence of light

Light Source – An object that makes its own light

Protect – To keep safe

Shadow – A dark area or shape produced by an item when blocking the light

Reflected – To bounce off

Reflective – Describes something that reflects light well



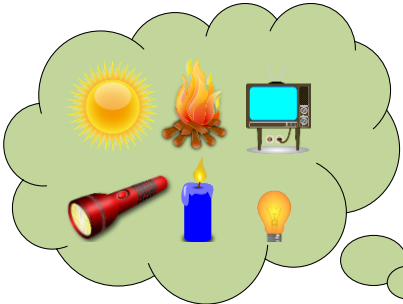
Holy Family Halewood Year 3 & 4 Science Light



Learning Objectives:

- To recognise that we need light in order to see & that darkness is the absence of light
- To explore the Sun as a light source and recognise that there are ways to protect our eyes
- To recognise that shadows are formed when light from a light source is blocked by a solid object
- To investigate how shadows behave
- To investigate how the size of shadows change throughout the day
- To explore how light is reflected from surfaces

Light Sources:

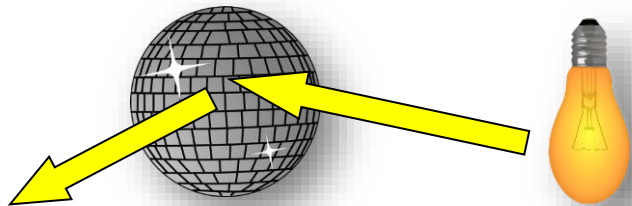


A mirror is **not** a light source.

It reflects light but doesn't create it.

How Light is Reflected:

When light hits a smooth object, it bounces off (reflects) making it appear shiny.



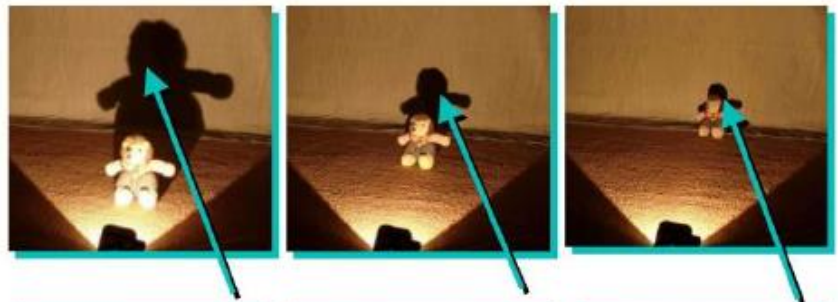
Key Facts:

- 1.) We can see objects because light reflects off them and into our eyes.
- 2.) Light reflects off most objects, especially colours like white and yellow.
- 3.) If there is no light at all (pitch-black), then there is no light to reflect and we can't see anything at all.
- 4.) At night you can still see a bit in the dark because the moon is reflecting light.

Because light travels in straight lines, when it hits an object, it is blocked. It can't bend around the object so it casts a shadow.



Shadows:



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