

Vocabulary

light source	An object that produces its own light (e.g. sun, fire).
shadow	A dark area or shape caused by the blockage of light.
transparent	An object which allows light to pass through it so that objects behind it can be easily seen (e.g. glass).
translucent	An object which allows some light to pass through it. It may be possible to see some unclear images through the object (e.g. tissue paper).
opaque	An object which does not allow light to pass through it (e.g. wood).
reflection	When a light hits a surface and 'bounces' off.
refraction	When light passes through a different object and its direction changes.
spectrum	A range of colours caused when white light is refracted. A rainbow shows a spectrum of colours.
rainbow	An arch of colour caused by the refraction of light on water droplets in the air, usually rain (Red, Orange, Yellow, Green, Blue, Indigo, Violet).
emit	Produces and sends out (light).

Light

Year 3 Autumn 2

Translucent, transparent and opaque

The diagram illustrates three types of light interaction with a vertical rectangular object:

- Transparent:** A flashlight on the left emits light rays that pass completely through the object. Text: "ALL light passes through".
- Translucent:** A flashlight on the left emits light rays that partially pass through the object, appearing dimmer. Text: "SOME light passes through".
- Opaque:** A flashlight on the left emits light rays that are blocked by the object. Text: "NO light passes through".

How shadows are created

As the light source moves higher in relation to the object, the shadow gets shorter. As the light source moves lower, the shadow gets longer.

The diagram shows a flashlight (light source) and a cube (object) in three different positions:

- High flashlight: A very short shadow is cast to the right.
- Medium flashlight: A medium-length shadow is cast to the right.
- Low flashlight: A long shadow is cast to the right.

Prisms

When white light passes through a prism, the light is separated into its component colours.

The diagram shows a triangular glass prism with a beam of "White Light" entering from the left. The light is refracted and dispersed into a spectrum of colors: Red, Orange, Yellow, Green, Blue, Indigo, and Violet. The prism is labeled "Glass Prism".

Key Facts

1.	Light travels in a straight line.
2.	Light travels faster than sound.
3.	Darkness is caused by an absence of light.
4.	The moon does not emit its own light - it reflects the sun.
5.	The size and shape of a shadow changes based on the distance and angle compared to the light source.