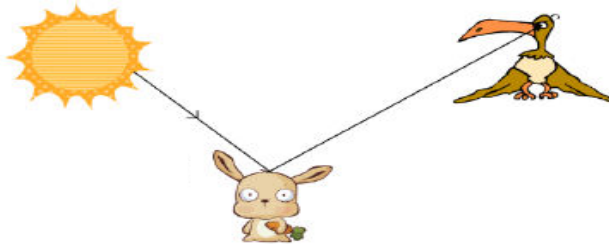


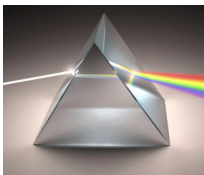
Where do shadows come from?

Light comes from a light source, reflects off the object and goes into the eye.



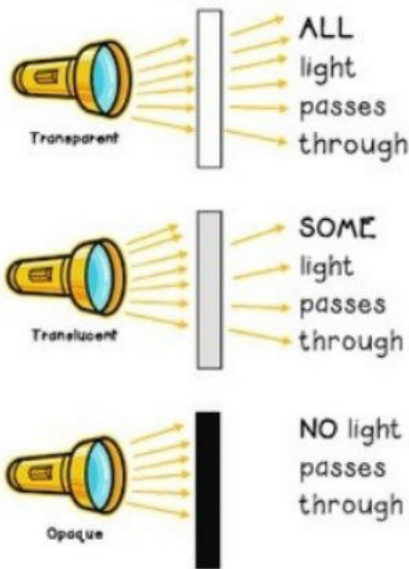
Light rays travel in a straight line.

Shiny materials reflect light beams better than non-shiny materials.



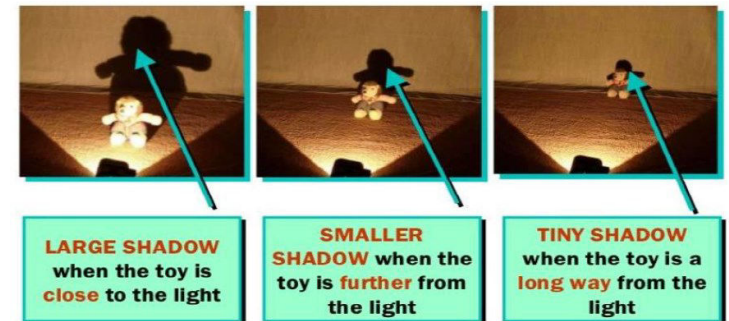
White light is made of a spectrum of colours with different wavelengths: red, orange, yellow, green, blue, indigo and violet.

Translucent, Transparent & Opaque



Shadows form when light is blocked by an object.

This is because light can only travel in straight lines. It cannot bend. If an object gets in the light's path, a shadow will form



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

Light source	Anything that makes light, whether natural or artificial
Dark	With little or no light
Transparent	Allows light to pass through
Translucent	Allows light but not detailed shapes to pass through
Opaque	Does not let light through and cannot be seen through
Shiny	Reflects light, typically cleaned and polished
Surface	Outside part or upper most layer of something
Shadow	Dark area or shape produced by an object blocking rays of light
Reflect	Throw back light without absorbing it
Visible	We can see it with our eyes

The earth spins once on its axis every 24 hours.

As places on Earth spin into sunlight, the sun appears to rise in the East and travel across the sky until it sets in the West.

As the height of the sun above the horizon increases during the morning, shadows cast by opaque, vertical objects (reduce until they are smallest at midday, when the sun is highest).

Our shadows lengthen again through the afternoon as the sun's height in the sky reduces.