

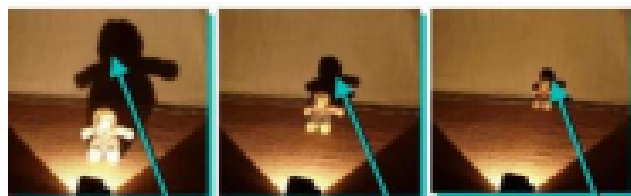
## Science Subject Knowledge Bank

### Year 3: Light

<u>Vocabulary</u>	<u>Definition</u>
<b>Shadow</b>	A dark area or shape produced by a body coming between rays of light and a surface
<b>Light Source</b>	Makes light
<b>Reflector</b>	To throw back light
<b>Translucent</b>	Allows some light through

#### Why do shadows change?

- The size of a shadow changes as the light source moves.
- The further away the light source is, the smaller the shadow is.
- The closer the source of the light, the bigger the shadow.



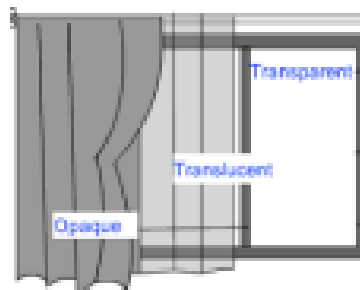
**LARGE SHADOW**  
when the toy is close to the light

**SMALLER SHADOW** when the toy is further from the light

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

#### What are light sources?

- We need light so that we are able to see in the dark.
- This is because the dark is the absence of light.
- The Sun and stars always give us light but we can only see the stars when it is dark.
- At night time we cannot see the Sun's light as the Earth turns and our part of the Earth is not lit up by the Sun at night.
- Light sources can be natural (the Sun) or artificial (light bulb).



#### Light source or reflector?

- The Moon is not a source of light even though we can see it in the dark.
- This is because the Sun's light reflects on the surface of the Moon making it appear as though the Moon emits light.
- Shiny things are not light sources - they appear to be sources of light as they are bright.

#### How are shadows formed?

- Shadows are formed when light from a light source is blocked by an object.
- When light is blocked by an opaque object, a dark shadow is formed.
- An opaque material blocks light so we can't see through it and shine a light through it.
- When light is shone onto a transparent object, the light travels through it, we can see through it and it makes a very faint shadow.
- When light is shone onto a translucent object, some of the light travels through it, we can see bright light sources through it and it makes a fairly dark shadow.
- Because the Earth is rotating, the sun's light shines on objects from different directions as the day goes on. This causes the sizes and shapes of shadows to change.

