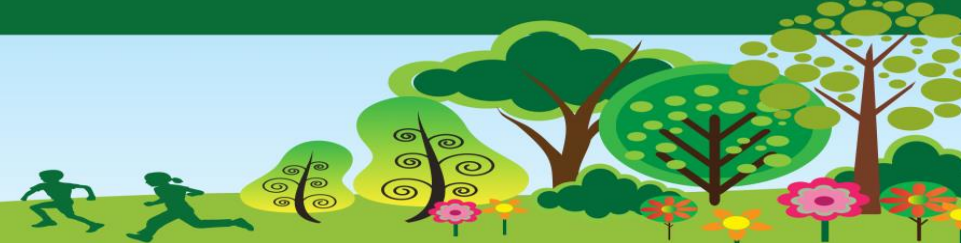


Knowledge Organiser - Science - Year 6 Autumn 2

Light

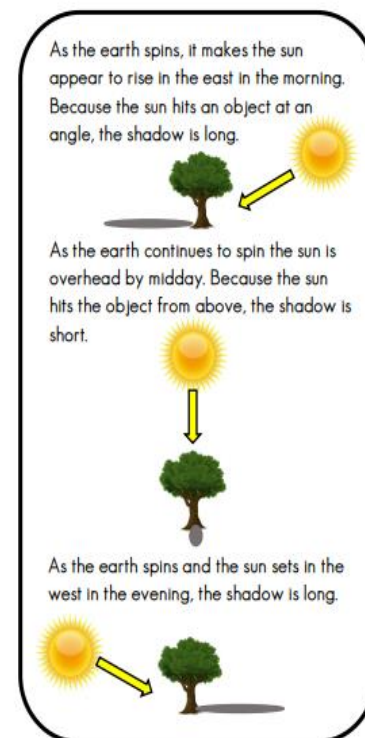


STICKY KNOWLEDGE

Light travels in straight lines.	The light rays from a light source reflect off the object we are looking at. The light travels in a straight line and enters the eye through our pupil.	Reflection is when light bounces off a surface, changing the direction of a ray of light Refraction is when light changes direction, or bends, when it moves from one material to another.
The closer an object is to the light source, the bigger the shadow. The further away the object is from the shadow, the smaller the shadow.	Opaque objects block the light rays so they can only travel around the edges of the object in straight lines. That is why a shadow is the same shape as the object.	White light is made up of the colours of the rainbow. When light is refracted through a transparent object, a rainbow is formed.

KEY VOCABULARY

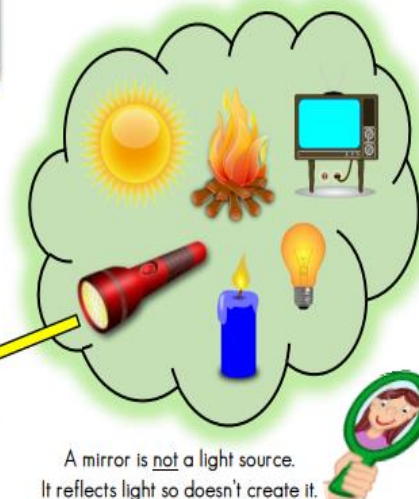
light source	an object that provides its own light
reflected	when light shines on a surface and bounces back
opaque	it describes materials which do not allow light to travel through
transparent	it describes materials which allow all light to travel through
spectrum	a band of several colours



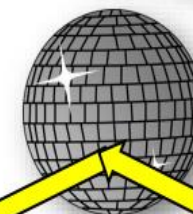
LIGHT

Light travels in straight lines. It travels from the light source either directly into our eyes, or reflecting off objects at 670 million mph.

LIGHT SOURCES



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.



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

- 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.

Opaque: This is the name given to objects which light *cannot* travel through. They block light and create shadows

Translucent: This is the name given to objects which *some* light can travel through.

Transparent: This is the name given to objects which light *can* travel through.

Rainbows are formed when the sun shines through water particles (transparent) and when white light passes through, it 'bends' and splits into the range of colours which make white light

ROY G. BIV

