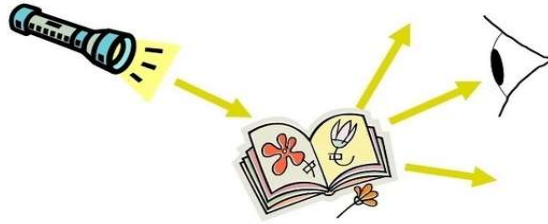


Knowledge Organiser

Y4

Light



How are shadows made?

Sometimes objects can block light which means that no light is able to pass through that object. An object from which no light can pass through is called an opaque object. The easiest example is our body. Stand in the way of a beam of light from a small torch. Ask someone to stand behind you and spot the beam of light. The person behind you will see no light since your body did not allow it to pass. Whenever light is not able to go through an object, it creates a dark area around the object. This patch where the light can not reach is called a shadow. Opaque objects create clear dark shadows.



Natural and Artificial Light Sources

Sun		Light bulb
Lightning		Torch
Fireflies		TV
Glow worms		Candle
Stars		Street Lights
Jellyfish		Fireworks

Light Reflectors

Moon
Mirrors
Smooth water
Metal
Smooth and Shiny Surfaces

Transparent -

Transparent materials are those that let light through with very little or no scattering of light. This means you can see clearly through a transparent material.



Translucent -

Translucent materials are those that let light through but in the process it is scattered. This means that you are unable to clearly see through translucent materials sufficiently to give a clear image.



Opaque -

Opaque materials do not allow any light to pass through them. The light that hits an opaque material is absorbed or reflected and you are unable to see through them.



Vocabulary

light -	The natural agent that stimulates sight and makes things visible.
light source -	Anything that makes light whether natural or artificial
surface	The outside or side of an object.
dark -	The opposite and absence of light.
reflect -	To throw back the light without absorbing it.
reflector -	An object that provides a reflection.
see	To have the power of sight.
shadow -	A dark area or shape produced by an object coming between the rays of light and the object.
solid	A large, block of hard material.
direction	The path along which light moves.
natural light -	Light from natural sources such as the sun.
artificial light -	Light created by human devices such as phones, torches and bulbs.