

Science Knowledge Organiser

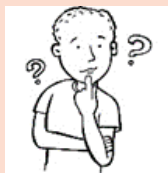
Year: 3 Term: 2 Topic: Light



Prior knowledge/key knowledge	
Year 2 prior knowledge.	Year 2 pupils have learnt that light is vital to living things including plants.
Do I need light to see things?	We need light to see things. Light travels in a straight line. It can be absorbed or reflected. Without light, we cannot see.
Some surfaces and objects reflect light.	Some surfaces reflect light well. These are called reflective surfaces. Reflective surfaces are usually smooth, shiny and flat, like a mirror for example.
Mirrors	Mirrors reflect light very well so they create a clear image. The image in a mirror appears reversed.
The sun	The sun is a natural (rather than manmade) light source. The sun rises in the east and sets in the west. The light from the sun is so powerful that we need to protect our eyes and skin from the UV light it produces by using sunglasses and sun cream.
What is a shadow?	Shadows form when light cannot travel through an opaque object. Shadows can change in size and direction depending on the position of the light source—for example how far away the light source is will affect the size of the shadow.

Vocabulary	
Light source	An object that makes its own light. The sun is an example of a light source.
Reflection	When light hits a surface and bounces back into your eyes.
Reflective/ Reflector	An object that reflects light well.
Transparent	An object that allows light to pass through.
Translucent	An object that lets some light through but the light is scattered so you can't see the image properly.
Opaque	You cannot see through it because no light passes through.
Shadow	A dark area or shape produced by a body coming between rays of light and a surface.
Ultra Violet light (UV)	The sun gives out ultra violet light. It is responsible for suntans and sunburns. Too much UV light is damaging to our skin and eyes.

Key skills /investigative focus	
Investigative focus	Observation and pattern seeking. Shadow puppet theatres - What affects the size of your puppet's shadow?
Key skill	Asking relevant questions and using different types of scientific enquiries to answer them.
Key skill	Setting up simple practical enquiries and using straightforward scientific evidence to answer questions or to support their findings.

Big Questions/Challenging Perceptions	
	What can you see when there is absolutely no light?
	What if we didn't have mirrors?

