



Y3 Knowledge Organiser – Light

What should I Know by the end of the unit?

- Recognise that they need light in order to see things and that dark is the absence of light.
- Notice that light is reflected from surfaces.
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- Recognise that shadows are formed when the light from a light source is blocked by a solid object.
- Find patterns in the way that the size of shadows change.

Mirrors **reflect light** very well, so they create a clear image. An image in a mirror appears to be reversed. For example, if you look in a mirror and raise your right hand, the mirror image appears to raise its left hand.



- What should I already know how to do?

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Key Vocabulary

Light	A form of energy that travels in a wave from a source.
Light Source	An object that makes its own light
Dark	Dark is the absence of light
Reflection	The process where light hits the surface of an object and bounces back into our eyes
Reflect	To bounce off
Reflective	A word to describe something which reflects light well
Ray	Waves of light are called light rays. They can also be called beams.



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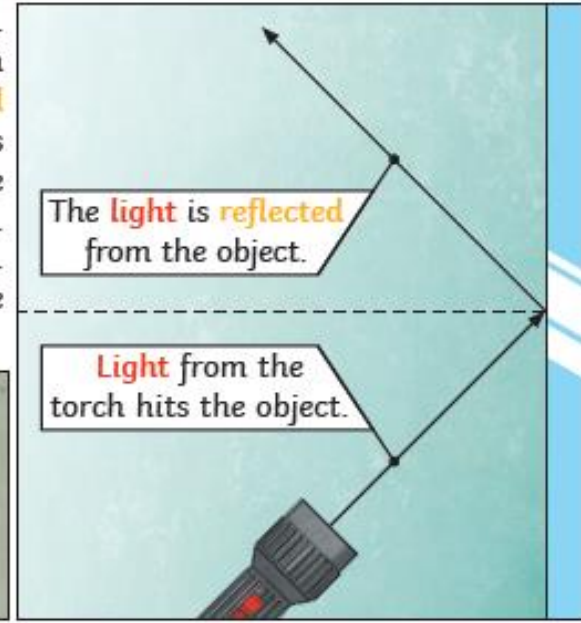
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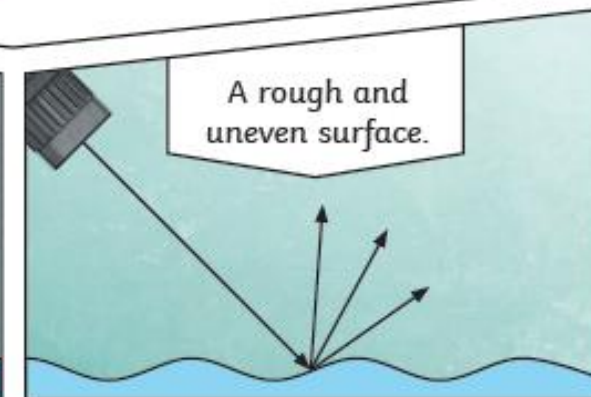
Pupil	The black part of the eye which lets light in
Retina	A layer at the very back of the eye. The retina takes the light the eye receives. It then changes it into nerve signals to send to the brain.
Shadow	An area of darkness where light has been blocked
Opaque	Describes objects that do not let any light pass through them.
Translucent	Describes objects that let some light through, but scatter the light so we can't see them properly.
Transparent	Describes objects that let light travel through them easily, meaning that you can see through the object.

Key Knowledge

We need **light** to be able to see things. **Light** travels in a straight line. When **light** hits an object, it is **reflected** (bounces off). If the **reflected light** hits our eyes, we can see the object. Some surfaces and materials **reflect light** well. Other materials do not **reflect light** well. **Reflective** surfaces and materials can be very useful...



The surfaces that reflect **light** best are smooth, shiny and flat.





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Key Knowledge

The pupils control the amount of **light** entering the eyes. If too much **light** enters, then it can damage the **retina**. To help protect the eyes, you can wear a hat with a wide brim and sunglasses with a UV rating.

A **shadow** is caused when **light** is blocked by an **opaque** object. A **shadow** is larger when an object is closer to the **light** source. This is because it blocks more of the **light**.

opaque	translucent	transparent

When the **light** source is directly above the object, the **shadow** will be directly underneath.

midday

When a **light** source is to one side of an object, the **shadow** will appear on the opposite side. The **shadow** will also be longer.

sunset

Pre and Post Assessment

Statement	Pre Assessment response	Post Assessment response
<ul style="list-style-type: none">Recognise that they need light in order to see things and that dark is the absence of light.		
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