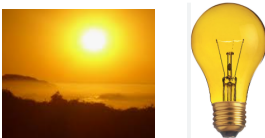
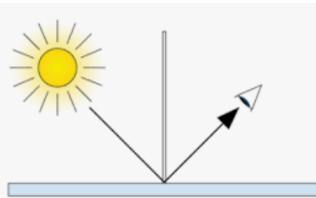
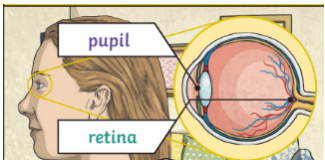




Science Knowledge Organiser – Year 3

Light & Dark – ‘Should we be grateful for light?’

Vocabulary	Definition	Picture
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.	
ray	Waves of light are called light rays. They can also be called beams.	

Pupil	The black part of the eye that lets light through it	
Vocabulary	Definition	Picture
Retina	A layer at the very back of the eye. The retina takes in light and changes it into a nerve signal to send to the brain	
Transparent	Describes objects that let light travel through them easily, meaning that you can see through the object like a window	
shadow	An area where the light has been blocked	
Opaque	Describes objects that do not let any light pass through them	



Science Knowledge Organiser – Year 3
Light & Dark – ‘Should we be grateful for light?’

		
Translucent	Describes objects that let some light through them, but that scatter the light so we can't see through them clearly	



Science Knowledge Organiser – Year 3
Light & Dark – ‘Should we be grateful for light?’

Sticky Knowledge:

I know that I need light in order to see things

I know that dark is the absence of light

I know that light is reflected

I know that light is reflected from the moon (it is not a light source)

I know that the sun is a light source and so are torches

I know that the light from the sun can damage my eyes but there are ways to protect my eyes

I know that shadows are formed when an opaque object blocks the light source

I know that:

Opaque means doesn't let light through

Transparent objects allow light through

Translucent objects let some light through

Transparent

✓ Allows all or most light to travel through.

✓ It's possible to see clearly through transparent materials.



Translucent

✓ Allows some light to pass through.

✗ It's not possible to see through translucent materials.



Opaque

✗ Blocks all the light passing through.

✗ It's not possible to see through opaque materials.





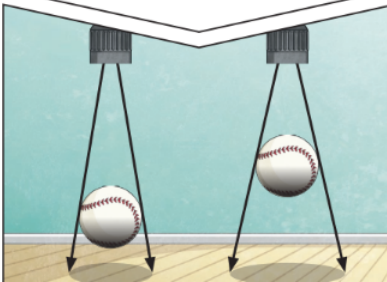
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Light & Dark – 'Should we be grateful for light?'

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.



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**.



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...



hi-vis jacket



cat's eyes

