Science Y3 – Autumn 2	Big question: 'How do we see things?'	Light

What I will know by the end of the unit:	
I can recognise that we need light to see and without light it is dark	Light is a type of energy that lets us see things  If there is no light then it is dark and we cannot see anything 
I can notice that light is reflected from different surfaces	Shiny surfaces reflect light   Matt surfaces don't reflect light very well  
I can recognise that light can be dangerous and know different ways to protect my eyes	 The light from the sun can be dangerous. It can damage our eyes. We must never look directly at the sun. We can protect our eyes by wearing sunglasses or sunhats in bright sunlight.
I can show that shadows are formed when light is blocked by an opaque object. I can identify how shadows change	 An opaque object blocks the light from getting through. A dark shape or outline is formed. This is a shadow  We can change the size of the shadow by changing the position of the: • light source • object • surface where the shadow is being made

Science Y3 – Autumn 2

Big question:
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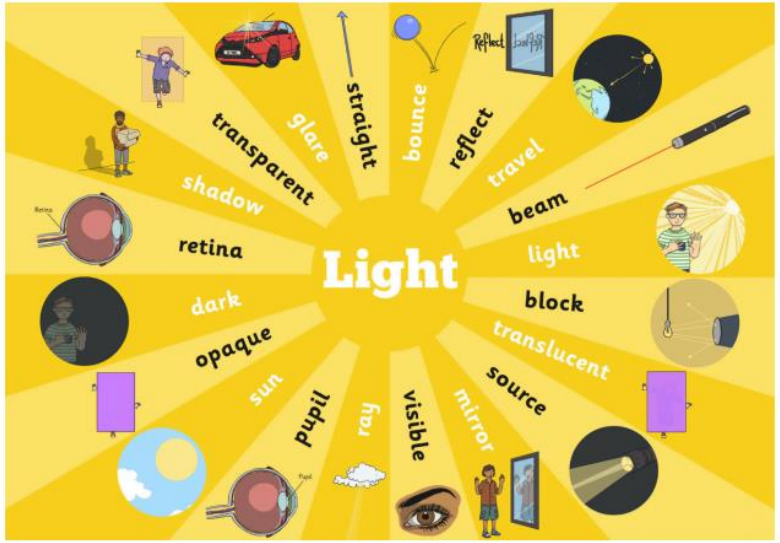
Light

Key Vocabulary	
absorb	Take in or soak up
dark	The absence of light
energy	A supply of power. The ability to do work
light	A type of energy. We can see objects because our eyes can sense light
light source	Where light comes from, eg a candle, the Sun
mirror	A shiny surface that reflects light in a regular way
opaque	Not clear. Blocks light so that none gets through
reflect	To throw back or bounce light from a surface
shadow	a dark shape or outline of something that is made when light is blocked
transparent	clear, see-through, lets light pass through
translucent	Almost see through, lets some light through

This unit of work links to …

- Material properties (Y1/Y2) and describing what we see (EYFS/Y1).
- Which part of the body are associated with what sense (Y1)
- Will feed into future light topic in Y6.



Investigate!

- What items can you still see in the pitch dark?
- What materials reflect the most light?
- What materials create the best shadows?
- How can you change the shape of a shadow?

Famous scientists

Sir Isaac Newton - In the 1660s, English physicist and mathematician Isaac Newton began a series of experiments with sunlight and prisms. He demonstrated that clear white light was made up of seven visible colours.
Ibn al-Haytham (965-1040) – Worked out that we see when light enters our eyes rather than leaving our eyes. Did experiments on bullseyes to find out about the structure of the eye and how it works. He proved that light travels in straight lines.