



Topic: Light

Subject: Science

Year: 3

Term: Autumn

### What should I already know?

- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

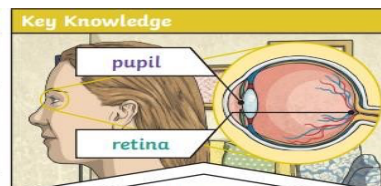
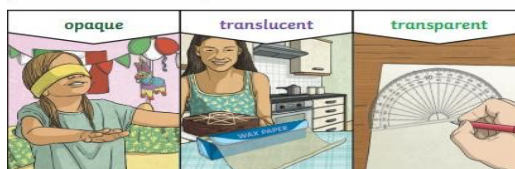
### What will I know and by the end of the unit?

- 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 an opaque object.
- Find patterns in the way that the size of shadows change.

### What will I be able to do by the end of the unit?

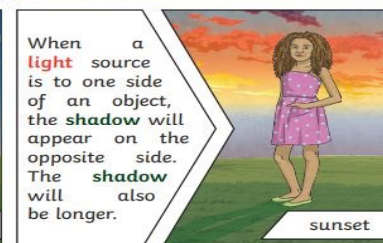
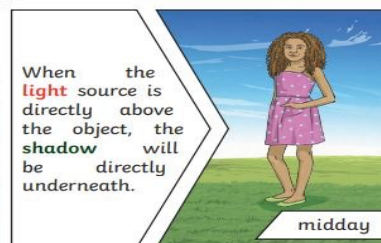
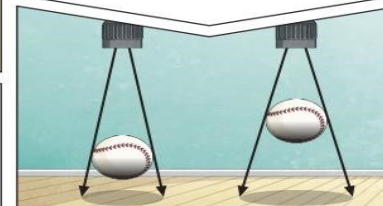
- Can describe how we see objects in light and can describe dark as the absence of light
- Can state that it is dangerous to view the sun directly and state precautions used to view the sun, for example in eclipses
- Can define transparent, translucent and opaque
- Can describe how shadows are formed
- Can describe patterns in visibility of different objects in different lighting conditions and predict which will be more or less visible as conditions change
- Can clearly explain, giving examples, that objects are not visible in complete darkness
- Can describe and demonstrate how shadows are formed by blocking light
- Can describe, demonstrate and make predictions about patterns in how shadows vary

Key Vocabulary	
<b>pupil</b>	The black part of the eye which lets <b>light</b> in.
<b>retina</b>	A layer at the very back of the eye. The <b>retina</b> takes the <b>light</b> the eye receives. It then changes it into nerve signals to send to the brain.
<b>shadow</b>	An area of darkness where <b>light</b> has been blocked.
<b>opaque</b>	Describes objects that do not let any <b>light</b> pass through them.
<b>translucent</b>	Describes objects that let some <b>light</b> through, but scatter the <b>light</b> so we can't see through them properly.
<b>transparent</b>	Describes objects that let <b>light</b> travel through them easily, meaning that you can see through the object.

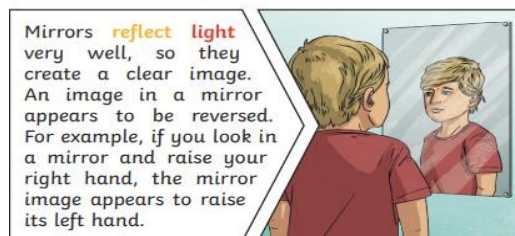


**The pupils** control the amount of **light** entering the eyes. If too much **light** enters, then it can damage the **retina**. To help protect the eyes, you can wear a hat with a wide brim and sunglasses with a UV rating.

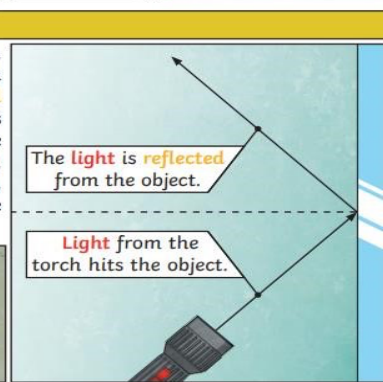
A **shadow** is caused when **light** is blocked by an **opaque** object. A **shadow** is larger when an object is closer to the **light** source. This is because it blocks more of the **light**.



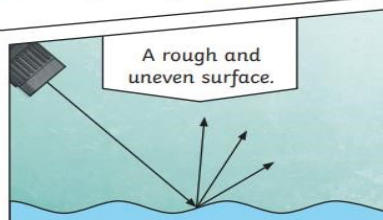
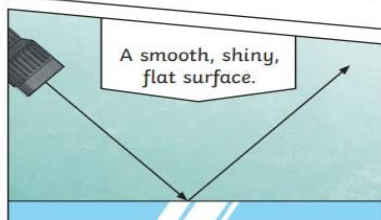
Key Vocabulary	
<b>light</b>	A form of energy that travels in a wave from a source.
<b>light source</b>	An object that makes its own <b>light</b> .
<b>dark</b>	<b>Dark</b> is the absence of <b>light</b> .
<b>reflection</b>	The process where <b>light</b> hits the surface of an object and bounces back into our eyes.
<b>reflect</b>	To bounce off.
<b>reflective</b>	A word to describe something which <b>reflects light</b> well.
<b>ray</b>	Waves of <b>light</b> are called <b>light rays</b> . They can also be called beams.



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.



To look at all the planning resources linked to the Light unit, [click here](#).

### Agreed Real Life Outcome:

Create artwork using shadows.