

Maple Tree Primary School

Year 6: Light

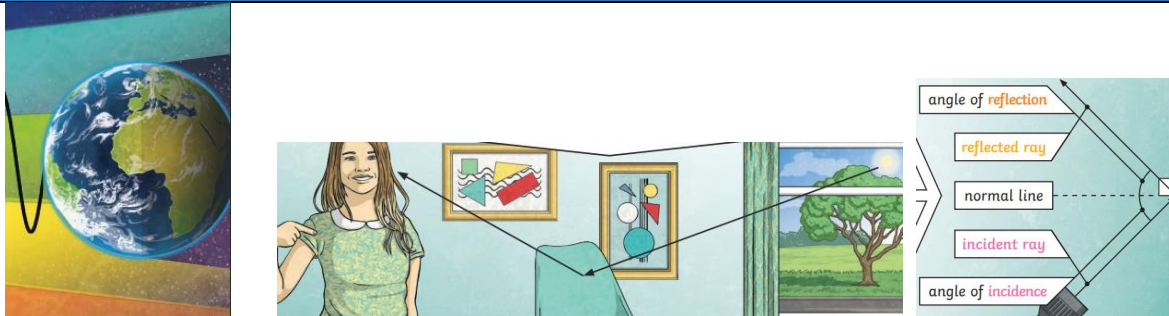
What should I already know?

- 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.

Knowledge and skills

- To know that we need light to be able to see things.
- To know that light waves travel out from sources of light in straight lines.
- To know that light waves are often called rays or beams of light.
- The law of reflection states that the angle of incidence is equal to the angle of reflection.
- An angle of reflection is the angle between the normal line and the reflected ray light.
- The angle of incidence is the angle between the normal line and the incident ray of light.
- Light travels as a wave. But unlike waves of water or sound waves, it does not need a medium to travel through. This means light can travel through a vacuum - a completely airless space.
- Light bends when it moves from air to water. When light bends in this way, it is called refraction.
- A shadow is always the same shape as the object that casts it.

Diagrams



Vocabulary	
Incident ray	A ray of light that hits a surface.
Light	A form of energy that travels in a wave from a source.
Light source	An object that makes its own light.
Opaque	Describes objects that do not let any light pass through them.
Prism	A prism is a solid 3D shape with flat sides. The two ends are an equal shape and size. A transparent prism separates out visible light into all the colours of the spectrum.
Reflected ray	A ray of light that has bounced back after hitting a surface.
Reflection	Reflection is when light bounces off a surface, changing the direction of a ray of light.
Refraction	This is when light bends as it passes from one medium to another. E.g. Light bends when it moves from air into water.
Shadow	An area of darkness where light has been blocked.
The law of reflection	The law states that the angle of the incident ray is equal to the angle of the reflected ray.
Translucent	Describes objects that things let some light through, but scatters the light so we can't see through them properly.
Transparent	Describes objects that let light travel through them easily, meaning you can see through the object.
Visible spectrum	Light that is visible to the human eye. It is made up of a colour spectrum.

Notes:

Question 1: Light travels in straight lines	Start of unit	End of unit
True		
False		

Question 2: All objects reflect light.	Start of unit	End of unit
True		
False		

Question 3: I can name a scientist who discovered information about light.		
	True/false	True/false
Isacc Newton		
Albert Einstein		
Michael Faraday		

Question 4: The definition of translucent is...	True/False	True/False
Describes objects that do not let any light pass through them.		

Question 5: A light source cannot make its own light.	
True/False	True/False

Question 6: I can explain how a shadow is formed.	
Start of unit	End of unit

Question 7: I can describe how light travels.	
Start of unit	End of unit

Question 8: I can mane some light sources.	
Start of unit	End of unit

Question 9: The definition of opaque is...	True/False	True/False
Describes objects that let light travel through them easily, meaning you can see through the object.		

Question 10: I can use a diagram to explain how we see things.	
Start of unit	End of unit