

Unit number:	2B (T3&4)	Year Group	Y5/6	Key Question	How can we change the future?
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Light

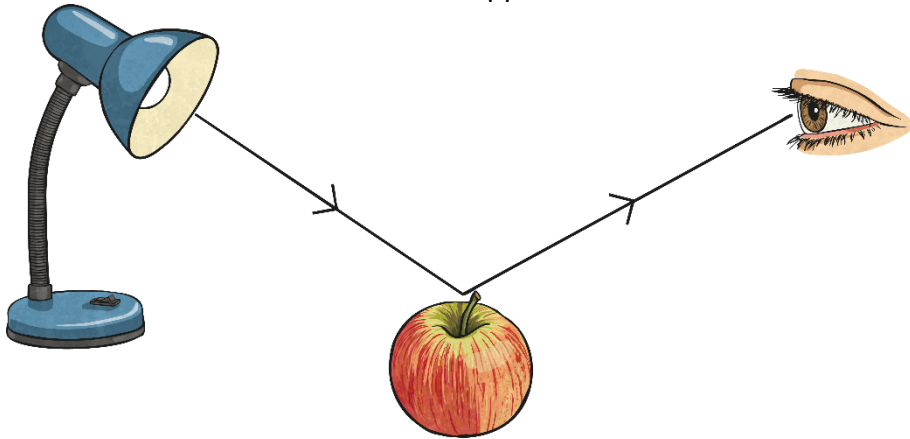
Essential Knowledge and Vocabulary	
Pioneers	We are going to find out about people we feel are changing our world for the better and think about how we can also make a difference. We are going to use our knowledge about electricity to make inventions of the future. We will use recyclable materials to create art in the style of Darrell Wakelam. Our learning about light will be linked to other inventions.
Essential knowledge:	<ul style="list-style-type: none"> Light travels in a straight line. When you place a torch on a table in a dark room, the beam travels in a straight line. Reflection is when light bounces off a surface - this changes the direction in which the light travels. Because light travels in straight lines, when there is an opaque object blocking the light, a shadow is formed. Shadows have the same shape as the objects that cast them. The size of a shadow changes as the light source moves.
Vocabulary	
angle	the direction from which you look at something
dark	the absence of light
dim	light that is not bright
electricity	a form of energy that can be carried by wires and is used for heating and lighting, and to provide power for
emits	to emit a sound or light means to produce it
light	a brightness that lets you see things
Mirror	a flat piece of glass which reflects light, so that when you look at it you can see yourself reflected in it
opaque	if an object or substance is opaque, you cannot see through it
reflects	sent back from the surface and not pass through it
shadows	a dark shape on a surface that is made when something stands between a light and the surface
source	where something comes from
surface	the flat top part of something or the outside of it
torches	a small electric light which is powered by batteries and which you can carry
translucent	if a material is translucent, some light can pass through it
transparent	if an object or substance is transparent, you can see through it

I already know:

- Certain things produce light, usually by burning (e.g. the Sun) or electricity (e.g. street lights)
- Shiny materials do not make light but do reflect it.
- Shadows are caused when certain materials block light.
- Light travels in straight lines. When light is blocked by an opaque object, a dark shadow is formed.
- The further away the light source is, the smaller the shadow is. The closer the source of the light, the bigger the shadow

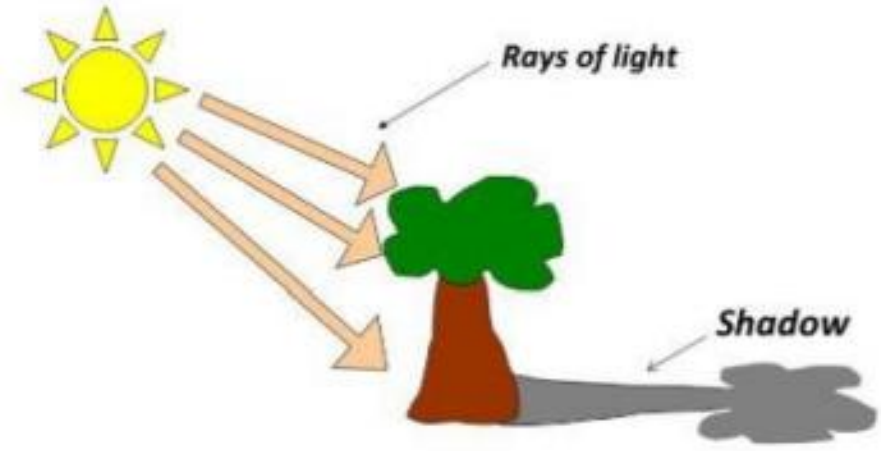
How do we see?

Light travels in a straight line and hits the apple. The ray of light is reflected off the apple and travels in a straight line to the eye allowing it to see the apple.



Shadows

Shadows are formed when an object blocks the light from a light source. The shadow will be the same shape as the object.



Coherence-Connections between subjects

Art	Reclaimed materials structures
Computing	Coding to create eco-warrior game
DT	Inventions of the future incorporating working circuits
History	Previous and current pioneers
Geography	Biomes and their features, global warming and pollution

Enrichment

Renewable energy workshop
Litter picking
Improving school environment
Looking after our local area
Fundraising

Writing Opportunities

Timeslip story
Setting descriptions
Explanation texts
Non-chronological reports
Biographies
Instructions
Poetry

Quality Texts

The Viewer by Shaun Tan and Gary Crew
Varmints by Helen Ward & Marc Craste
The Rabbits by John Marsden & Shaun Tan
The Promise by Nicola Davies
Earthways Earthwise by Judith Nicholls
A Planet Full of Plastic by Neal Layton
What a Waste by Jess French
The Extraordinary Life of Greta Thunberg by Devika Jina

Oracy opportunities

Debates
Ranking activities
Persuasion