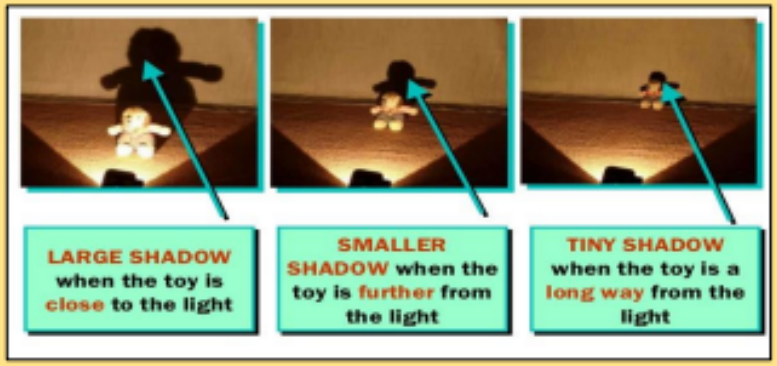
Year 3

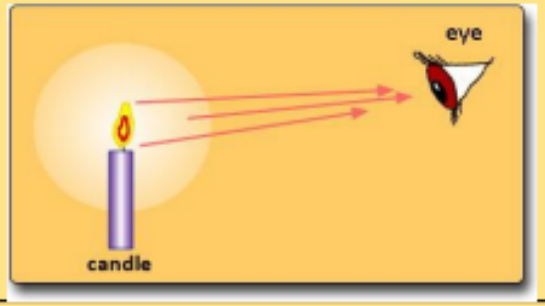
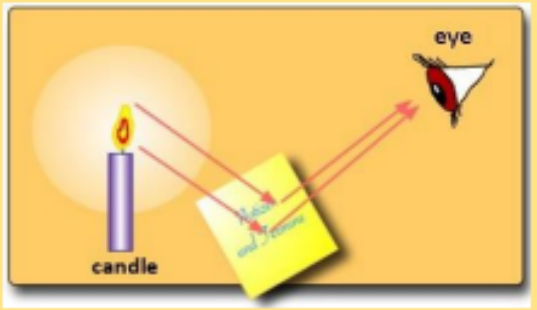
Science

Light

What We Need To Know	
We need light in order to see things because light reflects from objects surfaces. When light is absent, we call it dark.	
What is a light source?	A source of light is something that makes its own light.
Names of light sources:	The Sun, the stars, fire, lights powered by electricity, lights powered by batteries (torches) and some animals such as fireflies and glow-worms
Objects that you may think are light sources but in fact do **not** make their own light:	The Moon A mirror Shiny objects like aluminium foil. **These object's surfaces reflect light from a light source.**
How are shadows formed?	When light from a source is blocked by an opaque object, you get a shadow.
How does the size of the shadow change?	If an object is moved closer to the light source, the shadow gets bigger. If an object is moved further away from the light source, the shadow gets smaller. 
WARNING!	NEVER LOOK DIRECTLY AT THE SUN EVEN WHEN WEARING SUNGLASSES!

Key Vocabulary and Phrases	
Absent	missing
Opaque	An object you are not able to see through. Light does not travel through it.
Warning	Something that is said or written to tell people of danger.
Source	A thing from which something starts.
Electricity	A form of energy that provides power to devices.
Reflection	When light bounces off a surface.
Dark	The absence of light.

We see objects when light from a source enters our eye.

Light travels directly from a light source (the candle flame) into your eyes.	
Light travels from the light source, bounces off the object (the paper) and into your eyes, so that you see the object.	

Year 3

Science

Working Scientifically – Light

Key Vocabulary and Phrases	
ask questions	Use the question words **What, where, when why, how**
compare and contrast	Look at two or more objects and describe similarities (what is the same) and differences (what is different)
classify, sort and group	Organise objects by their features (e.g. colour, size, shape).
diagram	A labelled picture
record data	Drawings, scientific diagrams, photos, classification keys, tables, bar graphs and line graph, writing and numbers are ways to show what I have found out.
reporting and presenting findings	Giving reasons, explaining causes and relationships, explaining results and trusting its accuracy

How I could record my findings

Pictures
For EXPLORING

Use this if you want to tell the story of what you did or what you observed. e.g. bread going mouldy

Table
For FAIR TESTING/PATTERN SEEKING

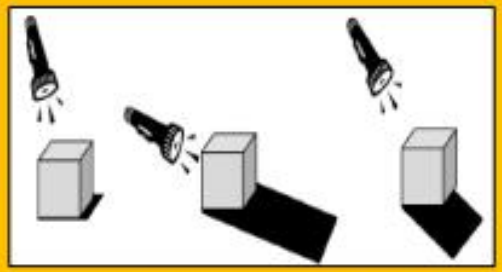
What I Change	What I measure

Use this to record your information. You can transfer it into some of the other forms as well. It could be all numerical or words

What I could investigate

What materials block light? Investigate the best materials to make a shadow puppet.

How do shadow sizes change?



How do mirrors reflect light?

Equipment I could use

Chalk to draw around the shadow outline.

Translucent, opaque and transparent materials to see which block light.

Torches to shine through the materials.

Bendable mirrors to investigate reflecting light.

A camera

Pencil and paper