

**What I should already know:**

1	That you see with your eyes
2	That light can be reflected from some surfaces.
3	How to make a shadow.
4	About transparent, opaque and translucent objects.

**Working scientifically skills:**

1	<b>Plan</b> different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
2	<b>Take measurements</b> , using a range of scientific equipment, with increasing accuracy and precision.
3	<b>Record</b> data and results of increasing complexity using scientific diagrams and labels.
4	<b>Report</b> and <b>present</b> findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms.
5	<b>Gather</b> and <b>record data</b> to help in answering questions.

**Key Vocabulary:**

1	Light rays	used to show the movement of light from its source to a surface or object. Rays are used to model how light moves.
2	reflect	to throw back light from a surface
3	opaque	cannot be seen through and does not allow light to pass through it.
4	Translucent	not transparent but clear enough to allow rays of light to pass through.
5	Shadow	the dark shape made when something blocks light
6	Transparent	light completely passes through it, and you can see clearly through it.
7	mirror	any glass or other smooth, polished surface that forms an image by reflection.
8	Reflection	light bouncing off the surface of an object.
9	Refraction	the bending of light that happens whenever it travels from one transparent material to another.

**What I will Learn:**

1	That light appears to travel in straight lines.
2	Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.
3	Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.
4	Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

**Scientists/Inventors:**

Isaac Newton (1643-1727)	Shone a light through a transparent prism, separating out light into the colours of the rainbow in a process called refraction. All these colours merge together to form visible light.
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