



SCIENCE: Physics: Light

Autumn B

Year 6



Key words	Explanation
Dark	The absence of light.
Image	A picture of how you see objects when light from them hits your eyes.
Light	The form of energy that makes it possible for us to see things with our eyes.
Light ray	A straight line showing the direction of travel of light.
Light source	Emits (gives out) light. It can be natural or man-made.
Opaque	Opaque materials/objects block all light.
Ray diagram	A drawing showing the straight-line paths that light travels in from a light source to the eye, often reflecting off objects on the way.
Reflect	Light reflects when it "bounces back" off a surface or object.
Scatter	If a light ray scatters it changes direction to a different random direction.
Straight lines	Continue in the same direction and do not curve.
Translucent	Translucent materials block some of the light and scatter the rest. This makes the images appear blurred.
Transparent	Transparent materials look clear, as all light passes through them.
Carroll diagram	A way of grouping data according to whether it fits certain criteria.
Luminous	A luminous object emits light, whereas a non-luminous object reflects it.
Matt	Matt surfaces look dull and not shiny.

Key words	Explanation
Mirror	A mirror reflects a clear image, with almost all the light bouncing back.
Shiny	A shiny surface reflects most of the light that reaches it.
Surface	The outside or top layer of something.
Fair test	An enquiry (to answer a scientific question) in which all except one variable is kept the same (controlled).
Line of best fit	A curved or straight line that best describes the pattern that the graph data show. It is not a dot-to-dot, and in fact it does not need to go through any of the data points, provided it goes as close to as many as possible.
Object	A shadow is seen when an object blocks light from a surface.
Screen	A surface on which a shadow is seen.
Shadow	A dark area caused by blocking light from a surface or a screen.
Variable	A factor that we either change or decide not to change in an experiment. In a fair test we only change one variable.
Axis (planetary)	An imaginary line around which something rotates. The Earth's axis is a made-up "line" passing through its centre, connecting the North and South poles.
Calibrate	When a measuring device is calibrated, it is marked with a standard set of readings.
Rotate	Something rotates when it moves in a circle around an axis.
Sundial	A device for timekeeping that uses the shadow cast by the sun on a marked scale. They have been used since about 1500 BC

Key Questions

Can you recognise that light appears to travel in straight lines?

Can you 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?

Can you use the idea that light travels in straight lines to explain why shadows have the same shape as objects that cast them?