Why are our eyes so special?

National Curriculum link: Light — Year 6,HT3

Prior knowledge (retrieval practice)

Key Vocabulary (substantive

1	light source	Light comes from different sources called light sources; our main natural light source is the sun.
2	rays of light	A light ray is a line (straight or curved). This is how light travels .
3	dim	Something that doesn't shine brightly or clearly.
4	dull	Lacking brightness.
5	opaque	Not able to be seen through; not transparent.
6	reflect reflection	Throw back (heat, light, or sound) without absorbing it.
7	transparent	Allowing light to pass through so that objects behind can be seen.
8	translucent	Allowing light to pass through.
9	periscope	Apparatus with a tube attached to a set of mirrors or prisms, to help people see things that are otherwise out of sight.

10	refraction	When light travels through water or glass. This bending is called refraction.
11	dispersion	The separation of white light into colours according to wavelength.
12	spectrum	A band of colours, as seen in a rainbow, produced by separation of the components of light.
13	cornea	The transparent layer forming the front of the eye.
14	iris	A flat, coloured, ring-shaped membrane (a thin sheet of tissue or layer of cells).
15	pupil	The opening of the iris.
16	retina	A layer at the back of the eyeball that contains cells sensitive to light.
17	variable	An element, feature, or factor that is liable to vary or change.

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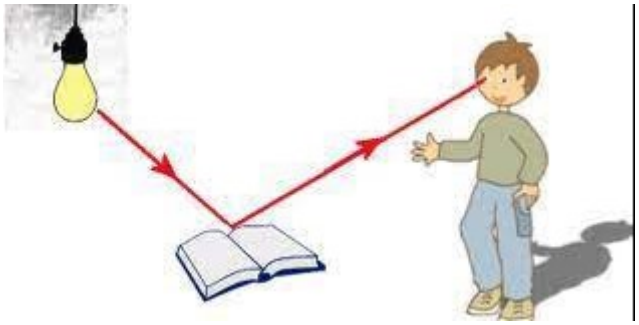
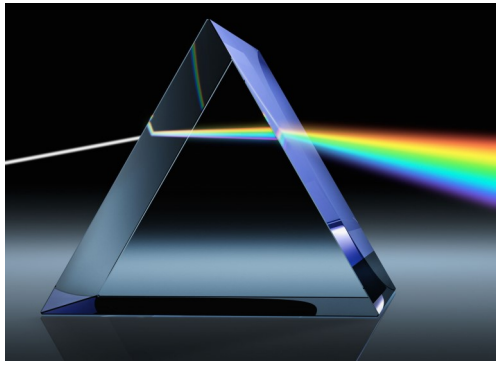


Key Concepts (substantive knowledge)

Light travels from a light source to our eyes.
Light travels in straight lines.
Objects are seen because they give out or reflect light into the eye.
Shadows are formed when light from a source is blocked by an opaque object.
The angle at which a light strikes an object affects the size and shape of its shadow.
The dispersion happens when the light passes from the air into the water, just like when it goes from air into the prism.



Career Idea: Optician

Working scientifically (disciplinary knowledge)

Using research to support or refute ideas
Noticing patterns
Carry out comparative and fair tests

Using test results to make predictions to set up further comparative and fair tests.
Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs