

Key Learning

Recognise that light appears to travel in straight lines.

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.

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.

Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

Key Individuals

Sir Isaac Newton

In the 1660s, English physicist and mathematician **Isaac Newton** began a series of experiments with sunlight and prisms. **Newton** went on to write a **New Theory of Light and Colour**, where he stated that **light** did not reveal colour, but was actually responsible for producing colour. Therefore, he demonstrated that clear white light was composed of seven visible colours.

Working Scientifically

- Record data and results or increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar, and line graphs.
- Find things out using a wider range of secondary sources of information.
- Describe and evaluate my own and others' scientific ideas using evidence from a range of sources.

Key Vocabulary

Reflect	To throw back (light, heat, sound, or the like) from a surface.
Shadow	The dark image cast on some surface by a person or thing blocking the light of the sun or another source of light.
Light ray	A thin beam of light.
Transmit	To send or carry from one place to another.
Opaque	Not letting light pass through.
Transparent	Letting light pass through and giving a clear view of objects on the other.
Translucent	Letting only some light through so that what can be seen on the other side is not clear.
Spectrum	A band of colours that is formed when light is passed through a prism, or in some other way. The six colours of a spectrum are red, orange, yellow, green, blue, and purple.
Absorb	To take in or soak up.
Prism	A solid glass or crystal object that light can pass through.
Refraction	The bending of rays or waves of light when passed indirectly from one medium to another with a different rate of transmission.

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