

Light and How We See

What is Light?

Light is a form of **energy**. It travels faster than anything else in the world and always in straight lines.

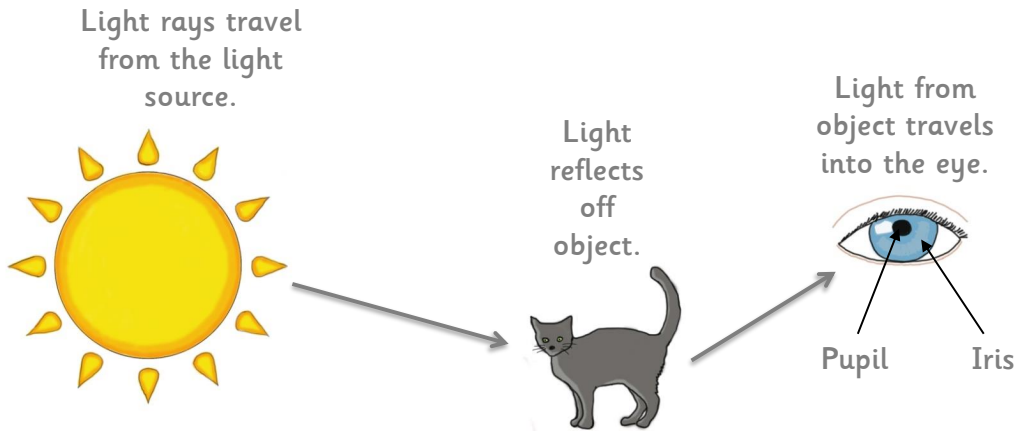
Light travels at about three hundred thousand kilometres per second.

Sources of Light

A source of light is anything that makes its own light. This can be **natural** like the sun, fire or lightning. They can also be manmade like lightbulbs, torches and computers. Many people think that the moon is a source of light but it actually just **reflects** light from the sun.

How Do We See?

Light is very important in allowing us to see things. We can see when light is reflected into our eyes. Light travels from the light source, bounces off an object and then enters our eyes through the **pupil**. The **iris** in our eyes can change size depending on how much light there is. If it is too bright, the iris gets smaller to stop too much light damaging the eye. If it is dark, the iris gets bigger to let in as much light as possible. If there is no light at all, we cannot see anything.



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Light and How We See – 2b – Text

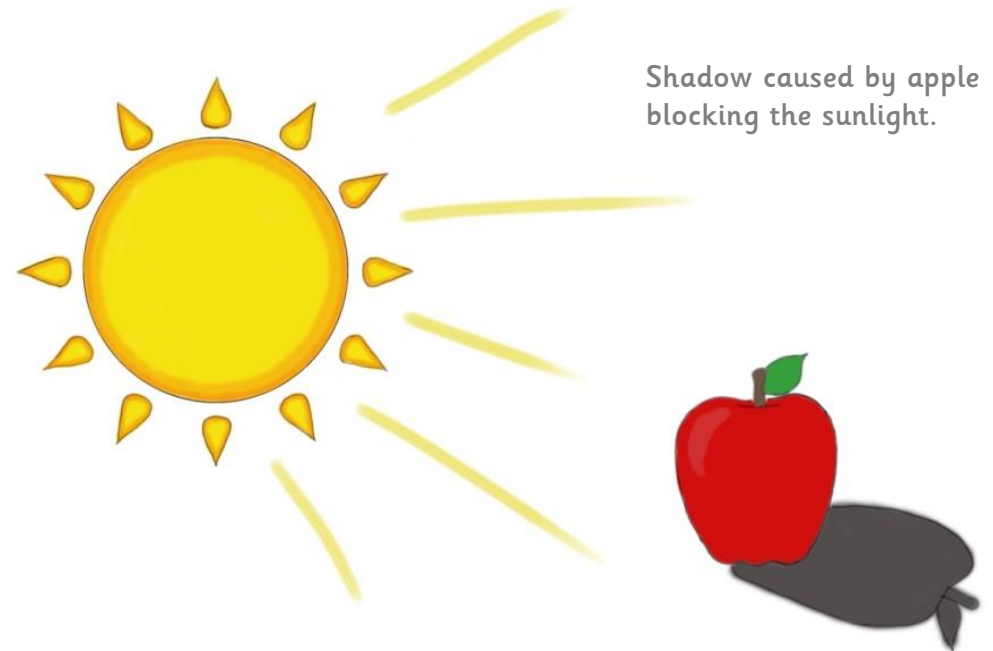
Can Light Travel Through Objects?

Light can travel through some materials but not others. **Transparent** materials are ones which will let all the light through. This is why windows are made out of the transparent material glass. Paper is an example of a **translucent** material. Translucent materials let some light pass through but they **scatter** the light in all directions so you cannot see clearly through them. **Opaque** materials will not let any light through. Wood and metal are examples of opaque materials.

Did you know that plants use light energy to produce their food?

What are Shadows?

Shadows appear when an object blocks light from getting through. Because light only travels in straight lines, it cannot go around objects so it creates areas of darkness. Shadows form a similar shape to the object blocking the light. Opaque objects create clear, dark shadows whereas translucent objects make **faint** shadows.



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Light and How We See – 2b – Text

Light and How We See – Follow-Up Work

Light and How We See – Vocab 1

Is this a fiction or non-fiction text? (AF6)

How does light travel? (AF2)

Name as many light sources as you can that are not mentioned in the text. (AF3)

Why is the moon not a source of light? (AF2)

Why do we need light? (AF2)

Which parts of our eyes help us to see? (AF2)

When can we not see at all? (AF2)

Why do you think transparent materials do not create shadows? V(AF2/AF3)

What are the subheadings for? (AF4)

What is the purpose of this text? (AF6)

Write down the meanings of these words. Use a dictionary or Thesaurus to help you.

energy _____

natural _____

reflects _____

pupil _____

iris _____

transparent _____

translucent _____

opaque _____

scatter _____

faint _____