

What is light and how can it be used?

Key Vocabulary

Light	A form of energy that travels in a wave from a source
Light source	An object that makes its own light.
Dark	Dark is the absence of light.
Transparent	An object that lets light travel through them easily, meaning that you can see through the object.
Opaque	Objects that do not let any light pass through them.
Translucent	Objects that let some light through but scatter the light so we can't see through them properly.
Shadow	An area of darkness where light has been blocked.
Reflect	To bounce off.
Ray	Waves of light are called light rays. They can also be called beams

Diagrams/knowledge

- Lights helps us to see.
- When light hits an object, it is reflected.
- If the reflected light hits our eyes, we can see the object.
- Some surfaces and materials reflect light well.



Key Knowledge

There must be light for us too see; without light, it is dark.

Transparent materials allow light rays to pass through them.
Opaque materials don't let light rays pass through them.

Rays of light bounce off some materials; this is called reflection.

Smooth, shiny materials reflect light rays better than bumpy, non-shiny materials.

Light comes from a light source and these can be natural or artificial.

The light from the sun can be dangerous. If too much light enters our eyes, then it can damage the retina.

We can protect our eyes by wearing sunglasses or sunhats in bright sunlight.

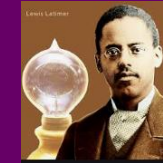
A shadow is caused when light is blocked by an opaque object.

A shadow is larger when an object is closer to the light source. This is because it blocks more of the light.

Key scientist

Lewis Howard Latimer (Inventor)

Lewis Howard Latimer was an American inventor. He worked for an electrical company and helped make electrical lighting practical and affordable by creating and inventing the incandescent lightbulb.



Working Scientifically



Grouping light sources based on their properties. Are the light sources natural or artificial?



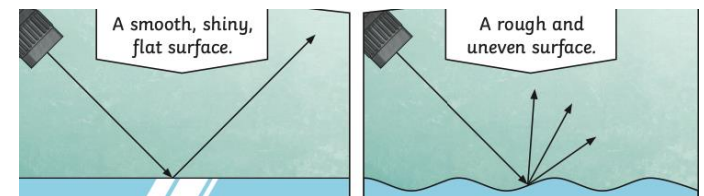
How does the size of shadow change depending on the position of the light source?



Which materials would be the best for making a shadow? Would it be opaque, transparent or translucent and why?

Diagrams/knowledge

The surfaces that reflect light best are smooth, shiny and flat.



Mirrors reflect light very well, so they create a clear image.

