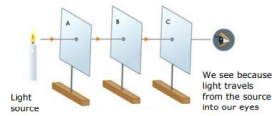


Light Knowledge Organiser

We need light so that we are able to see. Darkness is the absence of light.

Light is a form of **energy** which travels in **straight lines**.



A light source can be either **natural** or **man-made**.

Artificial Light

Artificial light sources are man-made. They include candles, lamps and matches

LAMP **MATCHES** **CANDLE**

Natural Light Source

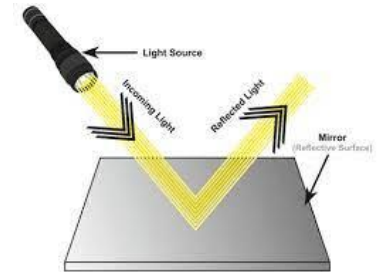
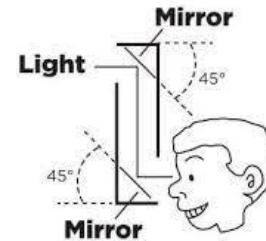
A natural light source is light that occurs naturally in nature.

- Examples
 1. Sun
 2. Stars
 3. Lightening
 4. Fireflies

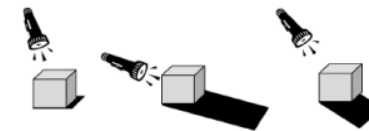
REFLECTION - When light from an object is **reflected** by a surface, it changes direction. It bounces off at the same angle it hits it.

Smooth, shiny surfaces such as mirrors and polished metals reflect light well.

Periscopes allow you to see things behind or above you using reflected light.



SHADOWS - Light travels in **straight lines**. When light waves hit an opaque object, they create a shadow. The **shadow's** shape will be the same as the object which has blocked the light.



The size of the shadow changes as the light source moves, the further away from the light source the smaller the shadow is and the closer the light source is to the object the bigger the shadow. The angle of the light source also makes a difference to the size of the shadow.

Opaque objects let **NO** light through.

Translucent objects let **SOME** light through.

Transparent objects let **ALL** light through.

Transparent	Translucent	Opaque
<ul style="list-style-type: none"> ✓ Allows all or most light to travel through. ✓ It's possible to see clearly through transparent materials. 	<ul style="list-style-type: none"> ✓ Allows some light to pass through. ✗ It's not possible to see through translucent materials. 	<ul style="list-style-type: none"> ✗ Blocks all the light passing through. ✗ It's not possible to see through opaque materials.

Light Knowledge Organiser

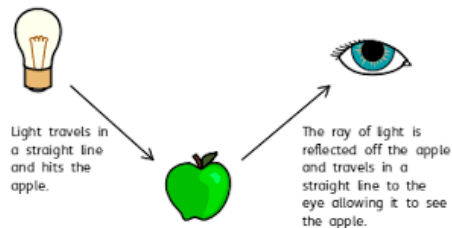
Energy: the ability to do work; energy is how things change and move.

Enquiry: an act of requesting information, usually in the form of a question

Faint: lacking brightness, vividness, clearness, loudness, strength, etc. a faint light

Investigate: a quest to find the answer to a question using the scientific method

Light: Light is a form of energy that travels in straight lines



Man-made: materials created by humans

Natural: something that comes from nature

Opaque: adj; cannot be seen through and does not allow light to pass through it

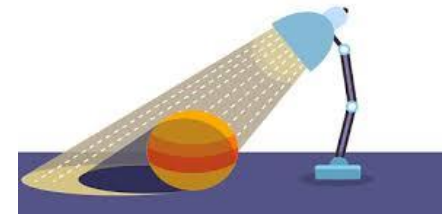


Partial: adj; of or relating to a part rather than the whole

Predict: to say what you think is going to happen based on existing knowledge

Results: your data or observations from an experiment

Shadow: the dark shape made when something



opaque blocks light

Source: The Sun and other stars, fires, torches and lamps all make their own light and so are examples of sources of light

Straight line: adj; a line without any bends or curves

Translucent: adj; allowing light, but not detailed shapes, to pass through

Transparent: adj; allowing light to pass through so that objects behind can be distinctly seen

Variable: anything that can change and be measured

Wave: light waves move in straight lines through space