Light Knowledge Organiser

Light sources

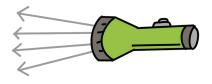
A light source makes light. The Sun and other stars, fires, torches and lamps all make their own light, so they are examples of sources of light.



Travelling light

Light travels very fast in **straight** lines called light rays. Even though light travels in straight lines, it travels in different directions.

Light rays from a torch travel in different directions but **always** in straight lines.



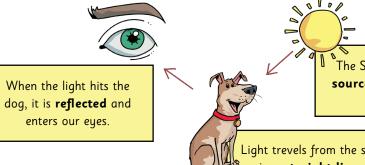


Reflective light

We can see things because light is **reflected**. Some materials reflect light better than others.

Light travels in straight lines. When light from an object is reflected by a surface, it changes direction.

Smooth, **shiny surfaces** such as mirrors and polished metals reflect light well. Dull and dark surfaces such as dark fabrics do not reflect light well.



The Sun is a **light source** so it creates liaht.

Light trevels from the sun in a straight line.

When light hits an object, it is **reflected** (bounces off) and enters our eyes. This is how we see the object.

We need **light sources** to be able to see; otherwise, there is no light to reflect off surfaces and into our eyes. This is why we cannot see in the dark.



Shadows

A **shadow** is made when an **object blocks light**. A shadow is a **dark area** or **shape** caused by a solid object blocking the rays of light from a light source.



Refraction

Light doesn't always travel in straight lines like it wants to; it can **change direction**.

Light rays change speed when they pass across the boundary between two states of matter, such as gas and liquid. This causes them to **change direction**, and this effect is called **refraction**.

An example of refraction is a straw in a glass of water.



Key Vocabulary

dark - the absence of light

direction - the way that something is moving
light - a source of energy that allows you to see
light ray - an imaginary line that represents the line of light
light beam - a group of light rays

light source - something that makes light

opaque - cannot see through

reflect - bounces off or changes direction

reflective - something that reflects well

refraction - when light changes direction when going through the boundary of a state of matter

see - to perceive with the eyes

shadow - a dark area or shape produced by an object coming between rays of light and a surface

transparent - can see through

translucent - can see through partially, but not in detail

