

## Y3/4 Science Knowledge Organiser and Vocabulary Sheet - Autumn 2

**Light:** A type of energy that makes things visible, allowing us to see. It travels in straight lines from a source, like the sun, a torch, or a light bulb.

**Darkness:** The absence or lack of light. It happens when there is no light source nearby, making it difficult or impossible to see.

**Sources:** Objects or places that produce light. For example, the sun, which is a natural source, or a lamp, which is a man-made source.

**Natural:** Light that comes from nature without being made by humans. Examples include sunlight, fire, and lightning.

**Man-made:** Light that has been created by people, using technology or materials. Light bulbs, torches, and street lights are all man-made sources of light.

**Reflective:** Surfaces or materials that bounce light back when it hits them, allowing us to see reflections. Mirrors and shiny metals are reflective.

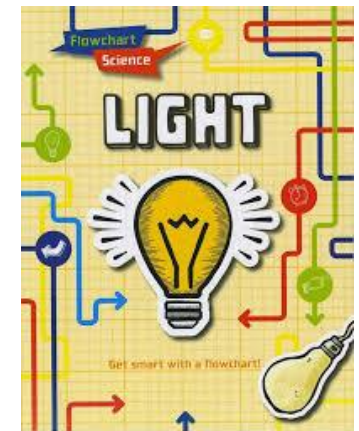
**Damage:** Harm that can happen to something, like our eyes, if they are exposed to too much bright light, such as looking directly at the sun.

**Shadow:** A dark shape that forms when an object blocks light from reaching a surface. Shadows have the same shape as the object that creates them.

**Opaque:** A material that does not let any light pass through it. You cannot see through opaque objects, like wood, metal, or thick cardboard.

**Translucent:** A material that lets some light pass through but scatters it, so you can't see clearly through it. Examples include coloured plastic drinks bottles or thin fabric.

**Transparent:** A material that allows light to pass through it completely, so you can see through it clearly. Examples include clear glass and clean water.

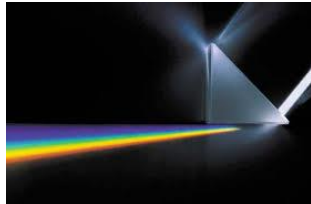


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Light is a type of energy that allows us to see things. When there is no light, it is dark and we cannot see.

Light comes from many different sources. For example, the sun, lamps and even fireflies. Some of these sources are natural, others are man-made.

Some surfaces are reflective. This means that light bounces off them. This allows us to change the direction the light is travelling in.



Our eyes are very sensitive and can be damaged by bright lights. We can wear sunhats or sunglasses to protect our eyes from the sun.



Some objects are 'opaque': this means that light cannot pass through them.

Some objects are translucent: this means that a little light can pass through them.

Some objects are transparent: this means that a lot of light can pass through them.

When an opaque object blocks a light source, a shadow is formed.

The size of a shadow can be changed by altering the distance between the object and the light source.

### TRANSPARENT, TRANSLUCENT, AND OPAQUE

