# Year 3 Science – Light Knowledge Organiser          Golden Thread: Freedom
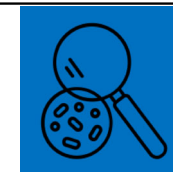
## Objectives and Sticky Knowledge

**Previous Knowledge Recap:**
Any own knowledge of light.

### Land Objectives and Sticky Knowledge:

| To know how light is formed. | To know about the pros and cons of sunlight. | To know how a shadow is formed. |
|---|---|---|
| *Know that dark is the absence of light<br><br>*Know that light is needed in order to see and is reflected from a surface<br><br>*Know and demonstrate how a shadow is formed and explain how a shadow changes shape | *Know about the danger of direct sunlight<br><br>*describe how to keep protected<br><br>*To know that sun provides us with Vitamin D | *Explain how light travels.<br><br>*Sort different materials according to whether they are opaque, transparent or translucent.<br><br>*Use these materials in an investigation into different shadows. |

| Links with 'Communication' Golden Thread: | Links with CST and CKA Values Crown: |
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# Year 3 Knowledge Science – Light

## 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. |
| **reflection** | The process where light hits the surface of an object and bounces back into our eyes. |
| **reflect** | To bounce off. |
| **reflective** | A word to describe something which reflects light well. |
| **ray** | Waves of light are called light rays. They can also be called beams. |

## Key Knowledge

We need light to be able to see things. Light travels in a straight line. When light hits an object, it is reflected (bounces off). If the reflected light hits our eyes, we can see the object. Some surfaces and materials reflect light well. Other materials do not reflect light well. Reflective surfaces and materials can be very useful...

hi-vis jacket

cat's eyes

The light is reflected from the object.

Light from the torch hits the object.

## Key Vocabulary

| | |
|---|---|
| **pupil** | The black part of the eye which lets light in. |
| **retina** | A layer at the very back of the eye. The retina takes the light the eye receives. It then changes it into nerve signals to send to the brain. |
| **shadow** | An area of darkness where light has been blocked. |
| **opaque** | Describes objects that do not let any light pass through them. |
| **translucent** | Describes objects that let some light through, but scatter the light so we can't see through them properly. |
| **transparent** | Describes objects that let light travel through them easily, meaning that you can see through the object. |

opaque · translucent · transparent

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

A smooth, shiny, flat surface.

A rough and uneven surface.