# Science Knowledge Organiser
## Year: 3 Term: 2 Topic: Light

THE HAMPDEN WAY
Aspiration & Opportunity
We do our best
We are kind
We are a team

## Prior knowledge/key knowledge

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| Year 2 prior knowledge. | Year 2 pupils have learnt that light is vital to living things including plants. |
| Do I need light to see things? | We need light to see things. Light travels in a straight line. It can be absorbed or reflected. Without light, we cannot see. |
| Some surfaces and objects reflect light. | Some surfaces reflect light well. These are called reflective surfaces. Reflective surfaces are usually smooth, shiny and flat, like a mirror for example. |
| Mirrors | Mirrors reflect light very well so they create a clear image. The image in a mirror appears reversed. |
| The sun | The sun is a natural (rather than manmade) light source. The sun rises in the east and sets in the west. The light from the sun is so powerful that we need to protect our eyes and skin from the UV light it produces by using sunglasses and sun cream. |
| What is a shadow? | Shadows form when light cannot travel through an opaque object. Shadows can change in size and direction depending on the position of the light source –for example how far away the light source is will affect the size of the shadow. |

## Vocabulary

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| **Light source** | An object that makes its own light. The sun is an example of a light source. |
| **Reflection** | When light hits a surface and bounces back into your eyes. |
| **Reflective/ Reflector** | An object that reflects light well. |
| **Transparent** | An object that allows light to pass through. |
| **Translucent** | An object that lets some light through but the light is scattered so you can't see the image properly. |
| **Opaque** | You cannot see through it because no light passes through. |
| **Shadow** | A dark area or shape produced by a body coming between rays of light and a surface. |
| **Ultra Violet light (UV)** | The sun gives out ultra violet light. It is responsible for suntans and sunburns. Too much UV light is damaging to our skin and eyes. |

## Key skills /investigative focus

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| Investigative focus | Observation and pattern seeking. Shadow puppet theatres - What affects the size of your puppet's shadow? |
| Key skill | Asking relevant questions and using different types of scientific enquiries to answer them. |
| Key skill | Setting up simple practical enquiries and using straightforward scientific evidence to answer questions or to support their findings. |

## Big Questions/Challenging Perceptions

What can you see when there is absolutely no light?

What if we didn't have mirrors?