

All children – regardless of gender, starting point or background – will have the opportunity to engage with a high-quality science education. They will be equipped with the knowledge, skills and vocabulary to understand how science can be used to explain what is occurring, predict how things will behave and analyse caused. We intend to inspire a sense of enjoyment and curiosity about science.

Light

Spring 2

Prior Knowledge

- We see objects because our eyes can sense light.
- Dark is the absence of light.
- We cannot see anything in complete darkness.
- Objects are easier to see if there is more light.
- Some objects, for example, the sun, light bulbs and candles are sources of light.
- Some surfaces reflect light. Objects are easier to see when there is less light if they are reflective.
- The moon is not a light source; it reflects the light of the sun.
- The light from the sun can damage our eyes and therefore we should not look directly at the sun.
- We can protect our eyes from the sun's UV rays by wearing sunglasses or sunhats in bright light.
- We can protect our skin from the sun's UV rays by wearing sunscreen.
- Shadows are formed on a surface when an opaque or translucent object is between a light source and the surface, blocking some of the light.
- The size of the shadow depends on the position of the source, object and surface.
- The closer the light source an object is, the bigger the shadow because the object blocks more of the light.
- Thermal imaging technology is a method of improving visibility of objects in an environment where there is a lack of visible light.



Key Vocabulary:

- Source
- Waves
- Light ray
- Beam
- Reflection
- Refraction



New Knowledge:

- Light appears to travel in straight lines, and we see objects when light from them goes into our eyes.
- The light may come directly from light sources, but for other objects some light must be reflected from the object into our eyes for the object to be seen.
- A reflection is light bouncing off a surface and changing direction.
- Objects that block light (are not fully transparent) will cause shadows. Because light travels in straight lines the shape of the shadow will be the same as the outline shape of the object.