

LKS2 Science Knowledge Organiser: Light

3 BIG IDEAS

Curiosity

I can explore light from the sun and ways to stay safe from it
I can explore materials which are reflective and non-reflective

Investigation

I can investigate and identify how shadows change throughout the day
I can investigate how shadows change in size relative to the position of the sun

Explanation

I know and can explain how shadows are formed
I know and can explain why shadows change in shape and size at different times of day
I know and can explain the difference between light sources and reflection

VOCABULARY

light source - anything that produces its own light

ray - a thin beam of light

reflective - a surface that light bounces off

non-reflective - a surface that light does not bounce off

vitamin A - a type of vitamin essential for good eyesight

vitamin D - a vitamin that comes from sunlight or food and is important for bone strength

ultraviolet light - a type of light that can be harmful

shadow - a dark image that is formed when an object blocks the light

cast - to throw or project

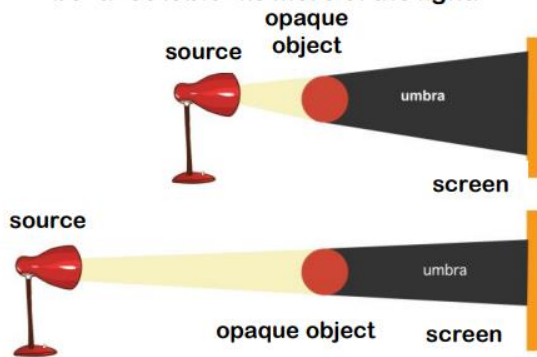
fluorescent - gives a highly visible reflection of light

position - where something is placed

shape - the outline of something

Size of a shadow changes

A shadow is caused when light is blocked by an opaque object. A shadow is larger when an object is closer to the light source. This is because it blocks more of the light.



Mirrors and reflection

Mirrors reflect light very well, so they create a clear image. An image in a mirror appears to be reversed. For example, if you look in a mirror and raise your right hand, the mirror image appears to raise its left hand.



Key Facts

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. Remember the Sun can be dangerous.



Light is reflected from surfaces

Light from the torch hits the object.

The light is reflected from the object.

