

Year 3 Knowledge Organiser- Can you make a shadow?

What will I learn?

In this topic we will learn:

- We need light to see
- That some things are easier to see in the dark than others
- How to make a shadow
- How to change the shape and size of a shadow
- That it is dangerous to look directly into the sun

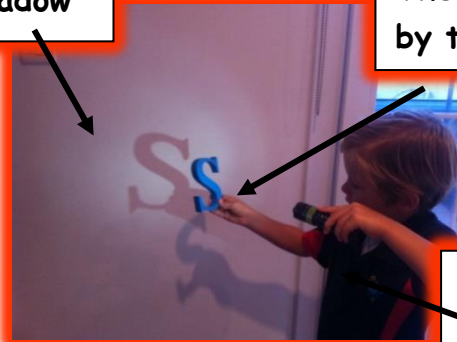
Previous learning

Year 1 - Are these toys old or new?
Year 2 - Are you afraid of the Big Bad Wolf?

You should already know:

That some materials are see through
That some materials are transparent and some are opaque

The shadow



The light is blocked by the shape

Light coming from the torch

Vocabulary Dozen

block	When an object stops the light from travelling through it.
dark	Without light
direction	Where the light is coming from
light	Something that lets you see objects
light source	Where the light is coming from
opaque	A material which blocks the light from travelling through it
reflective	When light bounces off a material
science	Learning about nature and things that happen naturally
shadow	When light is blocked and cannot get through an object
torch	A light which you carry in your hand
translucent	A material which allows a small amount to travel through it
transparent	A material which light can travel through

Key Knowledge

We need light to see things

We cannot see in the dark. We need light in order to see the things around us.

Some things are easier to see in the dark than others

Shiny and brightly coloured objects are easier to see in the dark than dull dark objects. This is because the light reflects off the object easier. It is important to wear bright reflective clothing when we are out in the dark. It keeps us safe as the traffic can see us clearer.

How are shadows made?

Shadows are made when light is blocked by an object. Opaque materials do not allow light to travel through them so a shadow is formed behind the object. Transparent materials let light travel through it so no shadow is formed.

Translucent materials will allow a small amount of light through so they make a faint shadow.

How do you change the size and shape of a shadow?

The size and shape of a shadow can be changed by moving the position of the light. Shadows are bigger the closer they are to the light source. Shadows become smaller the further away the light is. We can also change the shape of a shadow. Shadows are longer when the light source is low down and shorter when the light source is higher up. If you go outside the size and shape of the shadow will change through out the day as the position of the sun moves in the sky.

Light is dangerous to look at

Never look directly at a light as it will damage your eyes. Too much light into your eyes will cause permanent damage. It is particularly important to never look at the sun.

Useful Weblinks

