

What should I already know?

The parts of the body associated with each sense
 The simple physical properties of a variety of everyday materials

All Saints CE Primary School and Nursery

Year 3 Science
 Autumn 1 : Light

Our Questions

- Why do we need light?
- What is dark?
- DO all surfaces reflect light?
- Can the sun harm us?
- How can we protect ourselves from the sun's rays?
- How is a shadow formed?
- How do shadows change throughout the day?
- How can you change the size of a shadow?

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.



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 Sources

Natural	Artificial
 Sun	 Torch
 Candle	 Television
 Fire	 Light bulb

Light is reflected from surfaces

Light from the torch hits the object.

regular reflection

The light is reflected from the object.

irregular reflection

How we see things.

White light is made of a spectrum of colours with different wavelengths: red, orange, yellow, green, blue, indigo and violet.

Light comes from a light source...
 ...reflects off the rabbit...
 ... and goes into the eagle's eyes.

Light comes from a light source, reflects off the object and enters the eye.

VOCABULARY

Light- Light is a type of energy that makes it possible for us to see.

Source of light- The sun and other stars, fires, torches and lamps all make light are examples of light sources.

Natural Light – light generated by natural sources including the Sun, fire, glow worms

Artificial Light – Light generated by man-made sources , NOT naturally occurring

Dark- with little or no light

Absence of light- refers to darkness. No or little light

Transparent- allows light to pass through

Translucent- allows light but not detailed shapes to pass through- diffuses light.

Opaque- An opaque material does not let light through. It does not reflect light.

Shiny- reflect light, typically clean and polished.

Matt- dull and flat without a shine.

Surface- outside part of uppermost layer of something

Shadow- dark area or shape produced by an object coming between rays of light and a surface.

Reflect- throw back light without absorbing it.

Sunlight- light from the sun.