

National Junior School

Science Focus:

Light

Year 3

Summer

What? (Key Knowledge)

Light Sources

We need light in order to see things. When there is no light we say it is dark.

What is a light source?

- A light source is something that makes its own light.

Common sources of light

- The Sun
- The stars
- Flames
- Electric lights
- Some animals (fireflies and glow worms make their own light)

Things you may think are light sources but aren't.

- The Moon
 - A mirror
 - Shiny objects
- These basically reflect light from a light source but aren't light sources themselves.

Reflection

- Light bounces off some materials better than others.
- Shiny objects reflect light well.

The Sun

WARNING

IT IS NOT SAFE TO EVER LOOK DIRECTLY AT THE SUN, EVEN WHEN WEARING SUN GLASSES.

More about light

Things you need to know about light

- Light travels in straight lines
- Light travels very, very fast - 186,282 miles per second. (that's like travelling around the world over 7 times in a second)
- If something gets in the way of light, a shadow is formed.

Shadows

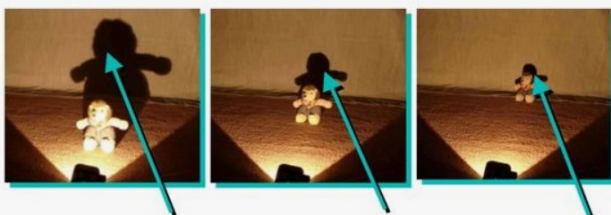
How is a shadow formed?

- When light from a source is blocked by an opaque object, you get a shadow.



How does the size of the shadow change?

- If an object is moved **closer** to the light sources, the **shadow gets bigger**.
- If an object is moved **further away** from the light source, the **shadow gets smaller**.



LARGE SHADOW
when the toy is close to the light

SMALLER SHADOW
when the toy is further from the light

TINY SHADOW
when the toy is a long way from the light

What? (Key Vocabulary)

Spelling

Definition/Sentence

Opaque

An object you are not able to see through.

Warning

Something that is said or written to tell people of danger.

Source

A thing from which something starts.

Electric

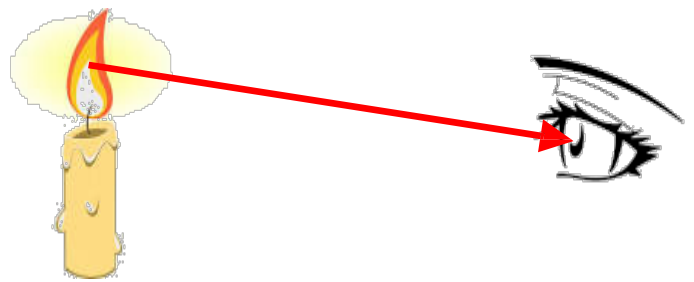
A form of energy that provides power to devices.

Reflection

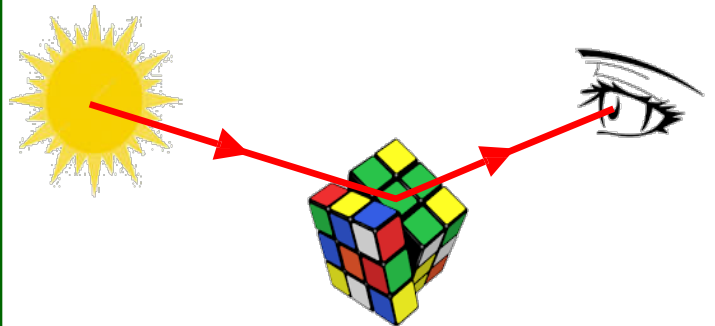
When light bounces off a surface.

Diagrams and Symbols

We see things when light from a source enters our eyes.



Above: Light travels directly from the light source (candle flame) to the eye.



Here the light goes from the light source, bounces off the object and into your eyes, so that you see the object.

Possible Experiences

- *describe the simple physical properties of a variety of everyday materials
- *compare and group together a variety of everyday materials on the basis of their simple physical properties.
- *identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses