



Science Focus:

Light

Year 3

Term:

## 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.

## 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.

## Objects can affect other objects at a distance

Light from close sources such as bulbs and candles and from the sun is seen because it affects our eyes. Objects that can be seen either give out light or reflect light from another source. This light reaches our eyes.

## 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.

## 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

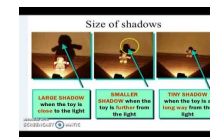
How is a shadow formed?

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



## Working as a Scientist

- Experiment to find out how the length of shadows can change with the seasons. (Caused by the earth's tilt).
- Can we make a light ray pass from 3H to 3T using mirrors?
- Shadow puppets theatres with size of shadow changes for bigger characters.