



# Light and Shadow

## Amazing Fact

You can buy a torch which is 20,000 times brighter than a regular torch. It can be used to start fires, melt polystyrene and even fry eggs!

## Challenge 1

Do you know how light travels?

Select the missing words from the torch below and fill in the gaps.



Light travels in \_\_\_\_\_ lines from a \_\_\_\_\_ of light, which bounces off an object. We can see the object because the \_\_\_\_\_ enters our eyes. Wood and cardboard are \_\_\_\_\_ objects, which light cannot travel through. \_\_\_\_\_ is a \_\_\_\_\_ material which allows light to pass through. Tissue paper is \_\_\_\_\_ which will let some light travel through. When an object blocks out the \_\_\_\_\_, a \_\_\_\_\_ is formed. Shadows are \_\_\_\_\_ at midday and \_\_\_\_\_ at the end of the day.

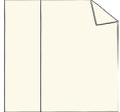
light      longest      opaque      transparent      shadow  
translucent      light      source      straight  
glass      shortest



## Challenge 2

Sort the materials into 3 groups: opaque, transparent and translucent.

Transparent	Opaque	Translucent

paper 

ice cubes 

window 

pencil 

sandwich bag 

glass bottle 

sticky tape 

chair 

tin can 

You could also try to find out:

- what the brightest light on Earth is;
- how far searchlights can cast their beams;
- how far your torch at home will shine;
- about the relationship between light and heat.

# Light and Shadow Answers

Light travels in **straight** lines from a **source** of light, which bounces off an object. We can see the object because the **light** enters our eyes. Wood and cardboard are **opaque** objects, which light cannot travel through. **Glass** is a **transparent** material, which allows light to pass through. Tissue paper is **translucent**, which will let some light travel through. When an object blocks out the **light**, a **shadow** is formed. Shadows are **shortest** at midday and **longest** at the end of the day.

