

### What is light?

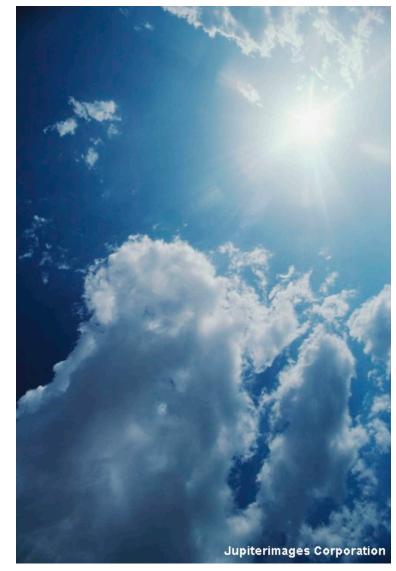


Light is produced by the Sun, and by objects such as light bulbs and matches.

Light carries energy and travels as a wave.

Light travels at a speed of 300,000,000 meters per second, which is much faster than the speed of sound.

Light waves travel in straight lines.







### **Light energy**



Light is a form of energy and can be changed from one form into another.

Light energy can be used to make other useful forms of energy. It can be converted into electrical energy in a solar cell or chemical energy in the leaves of plants.





solar cell

plants





# Which materials let light through?





#### How opaque are these materials?

0%

2.5%

5%

15%

30%

50%

100%

plexiglas

1 ply tissue

2 ply tissue

smoked glass

tracing paper

wood

glass







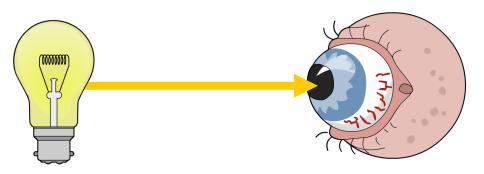




## How do we see things?

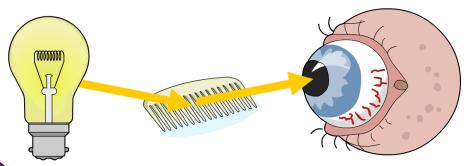


An object that gives out light is described as **luminous**. How does light from a luminous object such as a light bulb reach the eye?



Light travels in a straight line directly into the eye.

An object that does not give out light is **non-luminous**. How does your eye see a non-luminous object such as a comb?



Light hits the comb and some of it is reflected into the eye.



# **How the eye works**



