

Name: _____

Date: _____

WHAT IS LIGHT?

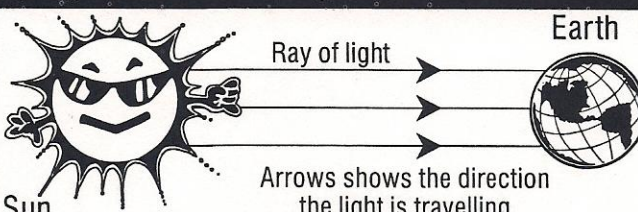
Light is the form of radiant energy that stimulates the organs of sight, having for normal human vision wavelengths ranging from about 3900 to 7700 angstroms and traveling at a speed of about 300 000 km per second. One angstrom = 0.00000001 cm.

WHAT??? This does not help us much, but if we look at the definition above, it basically says:

Light is a type of energy we can see.

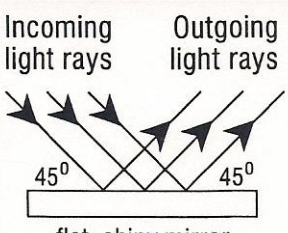
To help us we need to look a little closer at some of the properties of light.

1) Light travels in straight lines.



The diagram shows a smiling sun on the left and a globe of Earth on the right. Three parallel horizontal arrows labeled "Ray of light" point from the sun to the Earth. Below the arrows, text says "Arrows shows the direction the light is travelling".

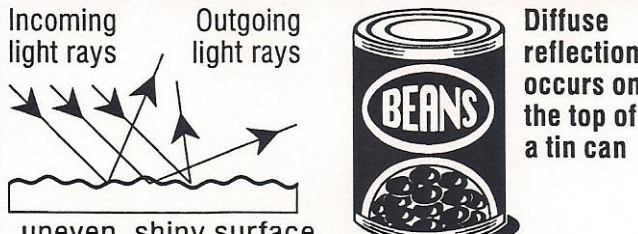
2) Light reflects off smooth, shiny, flat surfaces in a regular reflection pattern.



The diagram shows a flat, shiny mirror at the bottom. Two parallel incoming light rays strike the mirror at an angle of 45 degrees. Two parallel outgoing light rays reflect away at an angle of 45 degrees. To the right, a cartoon illustration shows a person looking into a bathroom mirror.


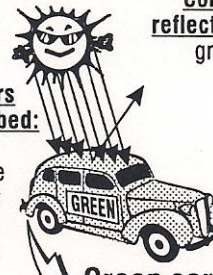


Regular reflection occurs in a bathroom mirror

3) Light reflects off rough, shiny, uneven surfaces in a diffuse reflection pattern.

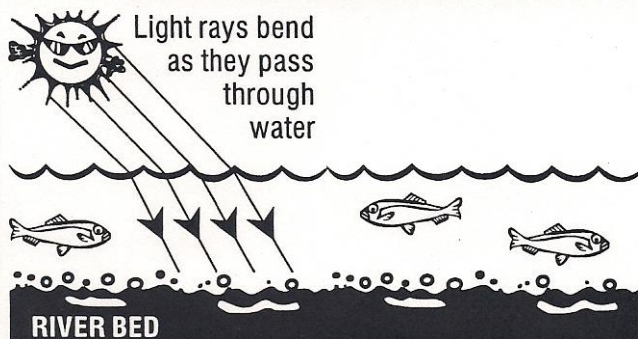


The diagram shows an uneven, shiny surface on the left and a tin can labeled "BEANS" on the right. Incoming light rays strike the surface at various angles, and outgoing light rays scatter in different directions. Text next to the tin can says "Diffuse reflection occurs on the top of a tin can".

4) Light that is not reflected is absorbed.

 <p>Colour reflected: red</p> <p>Colours absorbed: orange, yellow, green, blue, indigo, violet</p> <p>Red car</p>	 <p>Colour reflected: green</p> <p>Colours absorbed: red, orange, yellow, blue, indigo, violet</p> <p>Green car</p>
 <p>Colour reflected: (none)</p> <p>Colours absorbed: red, orange, yellow, blue, green, indigo, violet</p> <p>Black car</p>	 <p>Colour reflected: red, orange, yellow, green, blue, indigo, violet</p> <p>Colour absorbed: (none)</p> <p>White car</p>

5) Light bends as it passes through water



The diagram shows a sun on the left and a river on the right. Light rays from the sun pass through the air and bend towards the normal as they enter the water. The riverbed is labeled "RIVER BED" and contains several fish.

Think about what you have learned. Answer the questions below based on what you have just read.

1. Why do we have day and night?

2. Why would someone use a mirror to look into when doing their make-up?

3. Why do you look funny when you look at your reflection in aluminum foil?

4. What do you think are the seven official colours of a rainbow?

5. Why would a good spear fisher not throw his spear where he sees the fish?
