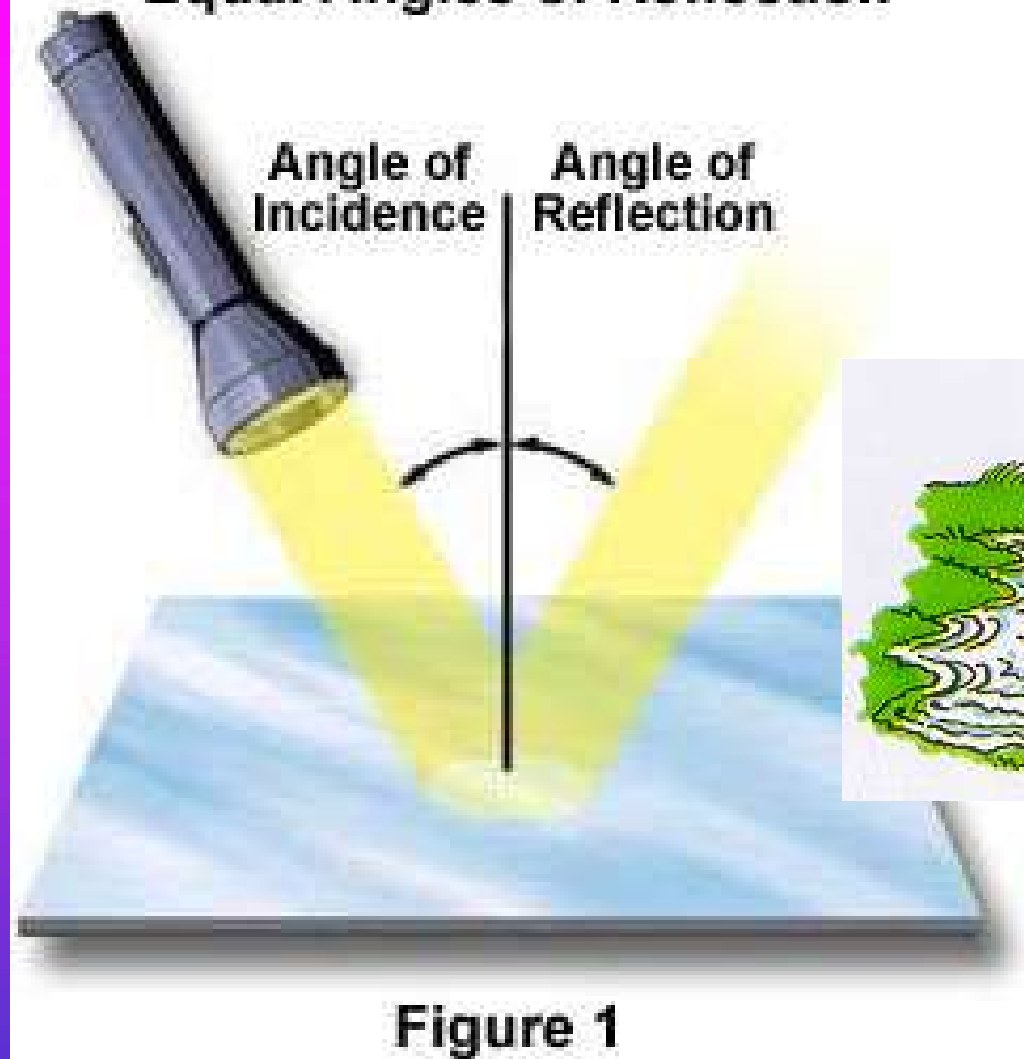


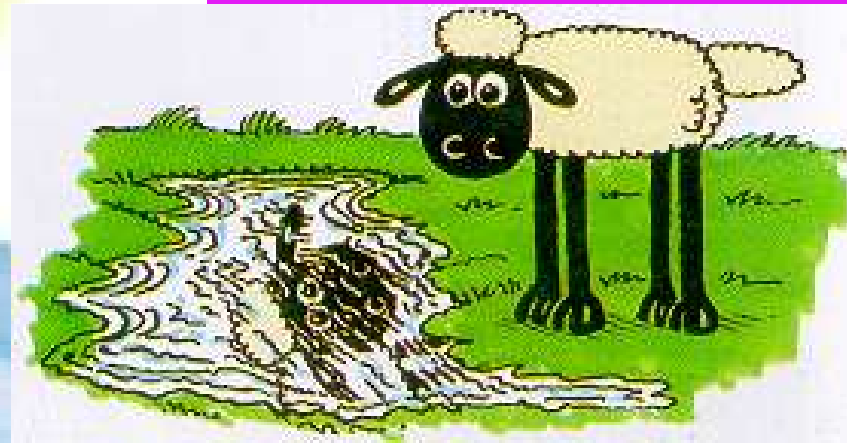
# LIGHT AND COLOUR



## Equal Angles of Reflection

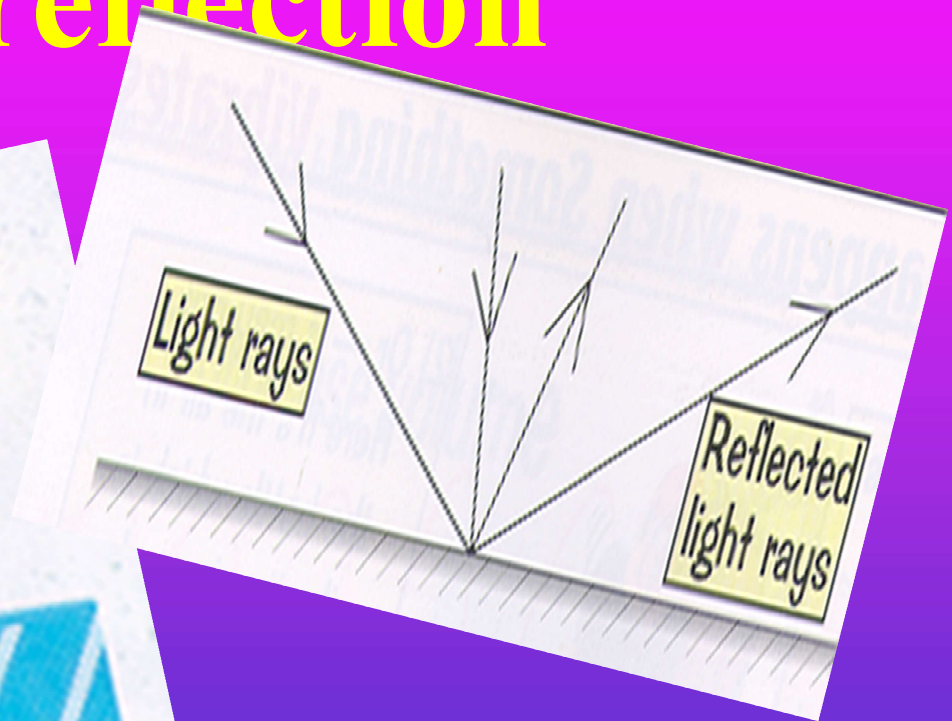
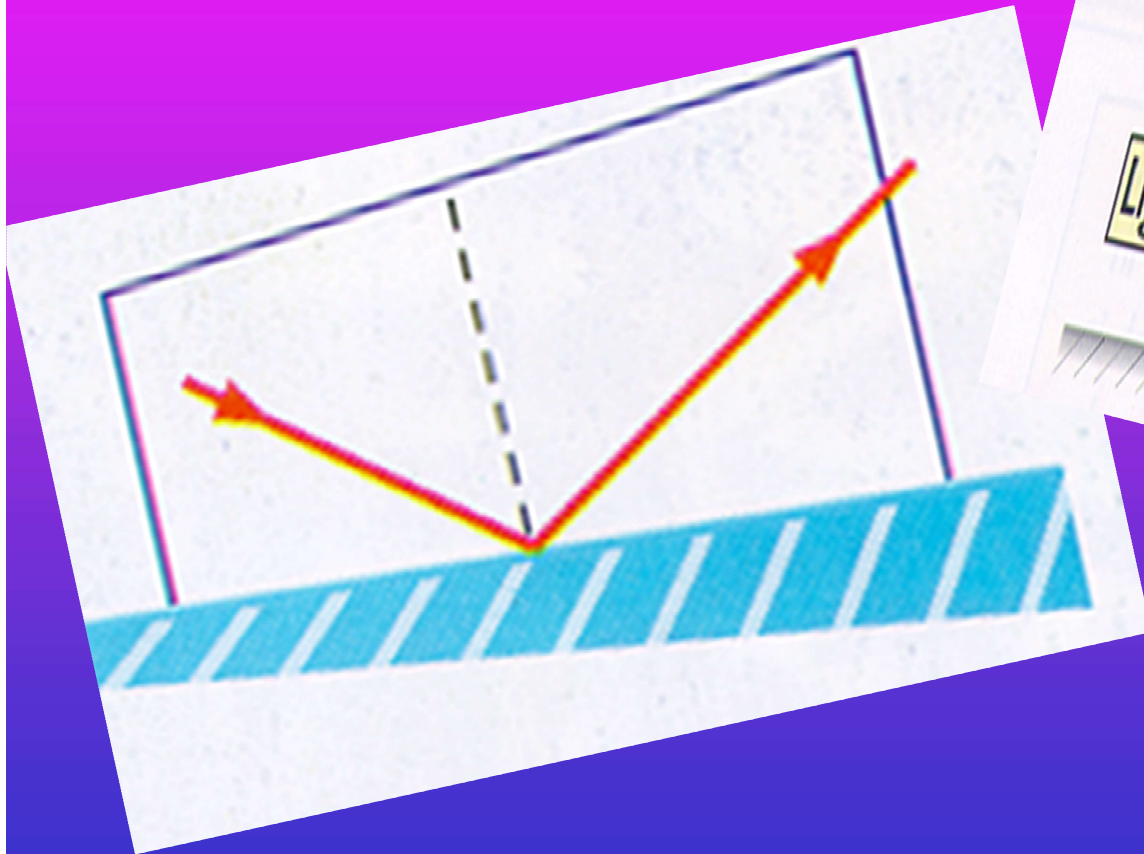


LINK TO  
INTERACTIVE  
SITE – CLICK  
HERE



<http://micro.magnet.fsu.edu/primer/java/reflection/index.html>

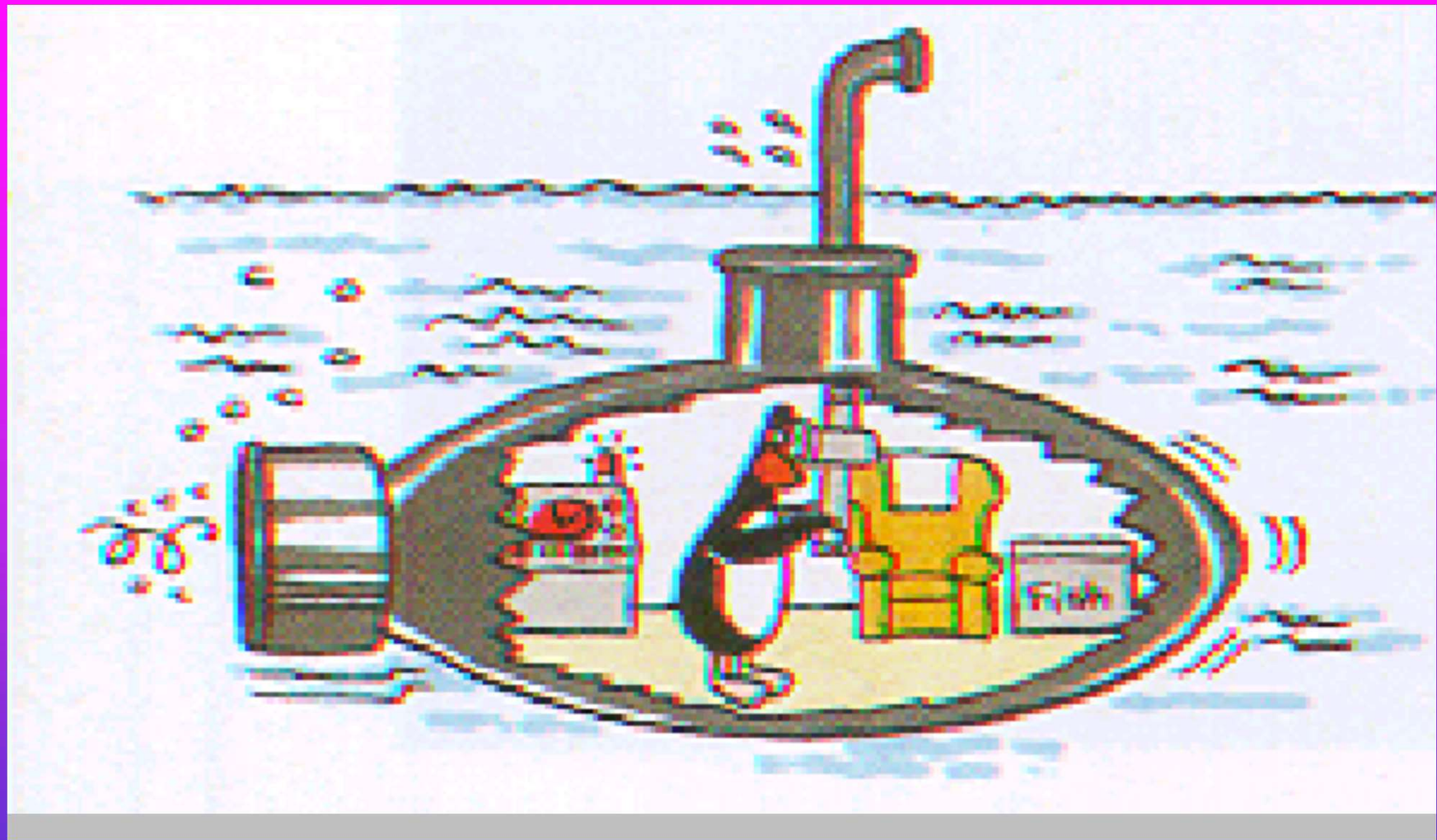
**Angle of incidence =  
angle of reflection**



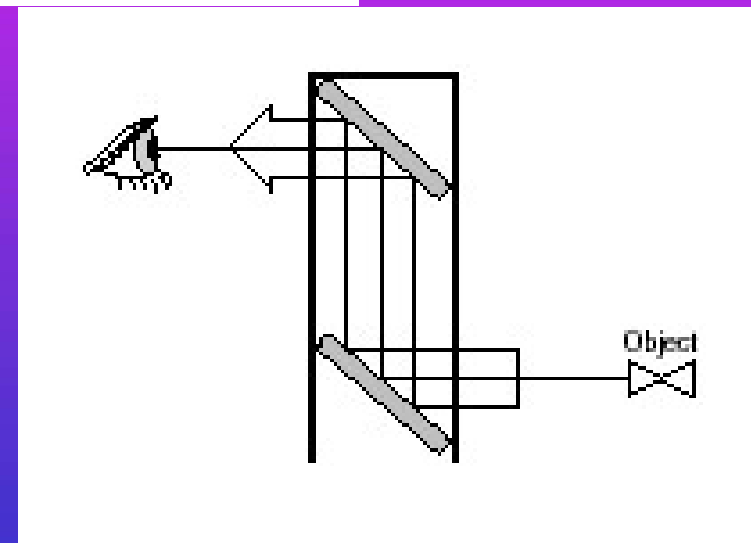
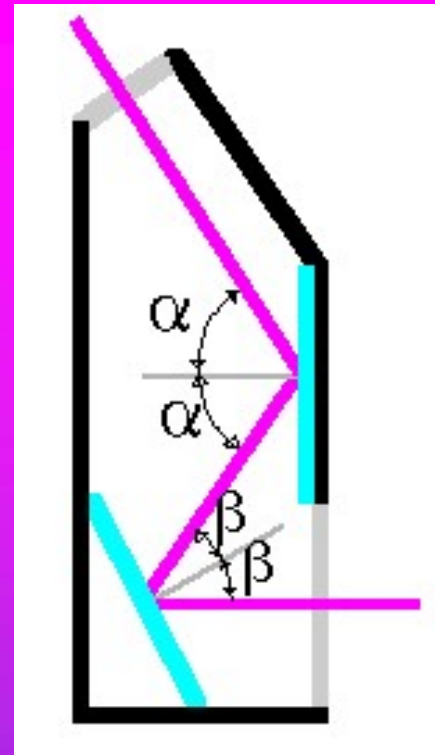
# THE LAW OF REFLECTION

- The angle of incidence is equal to the angle of reflection.
- The image in a plane mirror is virtual and is the same size as the object.
- Plane mirrors are used in periscopes.
- They are used in rear view mirrors.
- The image is as far behind the mirror is as the object is in front.
- Image is laterally inverted





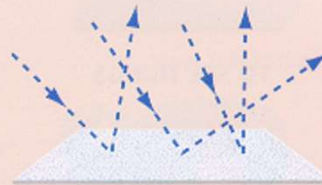
PERISCOPES



# LIGHT REFLECTION

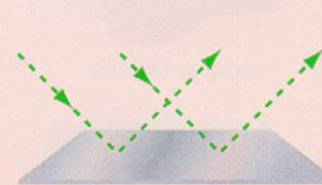
When light hits a surface it is reflected.  
Most surfaces **SCATTER** light in all directions.  
Mirrors and other shiny objects **REFLECT** light in specific directions.

## SCATTERED LIGHT



PAPER

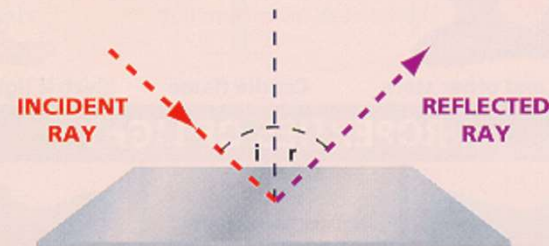
## REFLECTED LIGHT



MIRROR

## REFLECTION

When a light ray hits a surface we call it an **INCIDENT RAY**.  
The light reflected off the surface is called a **REFLECTED RAY**.



### REMEMBER

When light hits a mirror  
the angle of incidence = the angle of reflection  
angle  $i$  = angle  $r$

## Specular and Diffuse Reflection

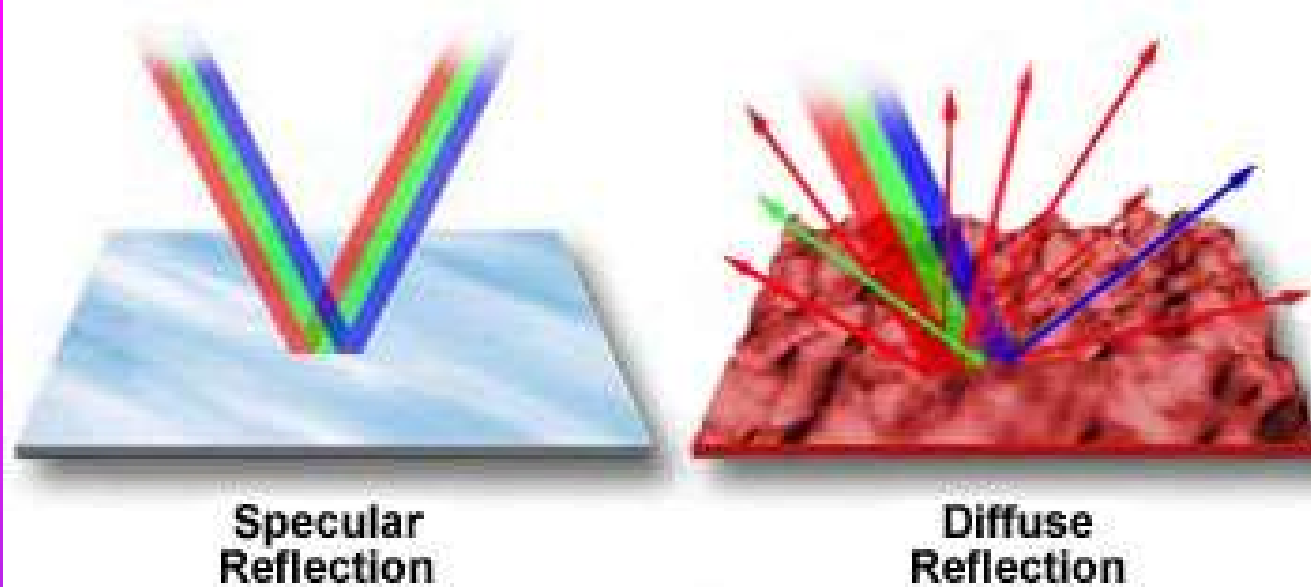
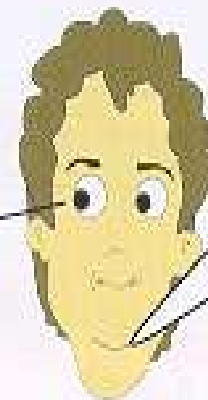


Figure 2

Shiny smooth surfaces reflect regularly, other surfaces also reflect light but if the surface is rough the light is reflected in all directions. We call this **diffuse** reflection.



Diffuse Reflection



Wow!  
looks nice

Mirror, Mirror  
on the wall,  
who's the fairest  
of them all?



YUK!