

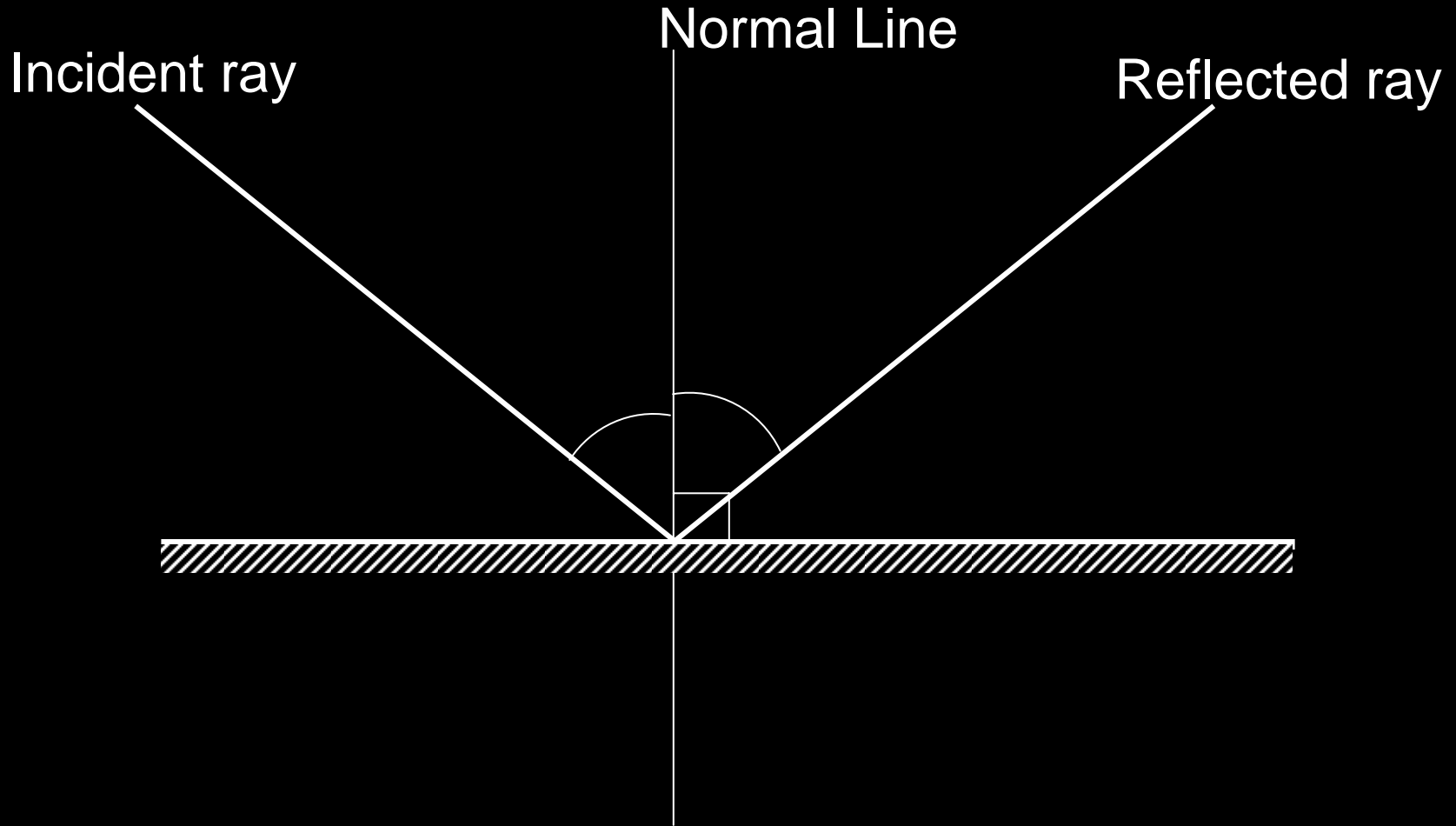
Unit - K3 Refraction

Form Group 8_y



25th of May 2007

THE LAW OF REFLECTION



The Angle of Incidence = The Angle of Reflection

Bending Light...

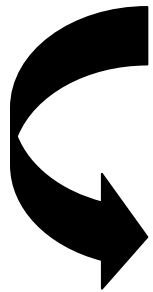
The speed of light waves depends on the material they are travelling through.

air = fastest

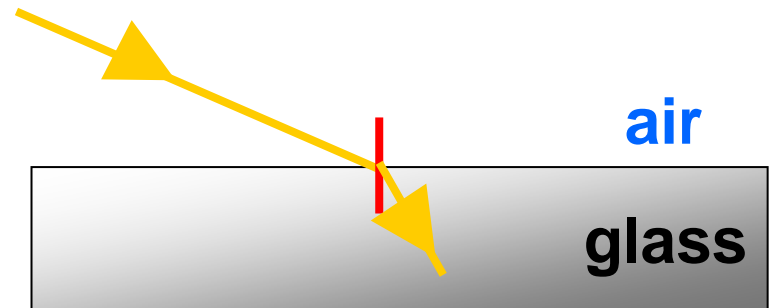
glass = slower

diamond = slowest

If light waves enter a different material (e.g. travel from glass into air) the speed changes.



This causes the light to bend or **refract**.



Effects of Refraction...

This ruler appears bent because the light from one end of the ruler has been refracted, but light from the other end has travelled in a straight line.



Notes...



1. When the light goes from one transparent material to another one it may refract (bend).
2. The light must enter the new material at an angle for refraction to happen.
3. Refraction happens because the light changes speed.
4. When light enters a **more dense** medium (e.g. glass), it bends **towards** the normal.

Refraction investigation

1. Place a rectangular glass block on a sheet of paper and draw around it.
2. Draw a normal line (at 90°) along the top surface of the block.
3. Shine rays of light with incident [i] angles of 30° , 60° and 0° into the block, making sure they all hit where the normal line crosses the glass surface. Measure angle ' r ' each time and record the results.

