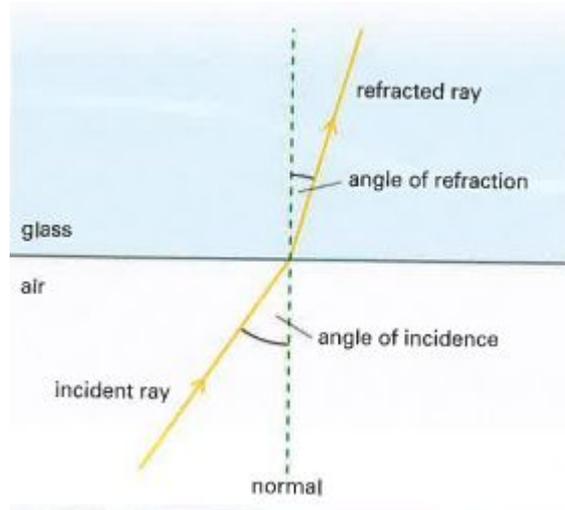
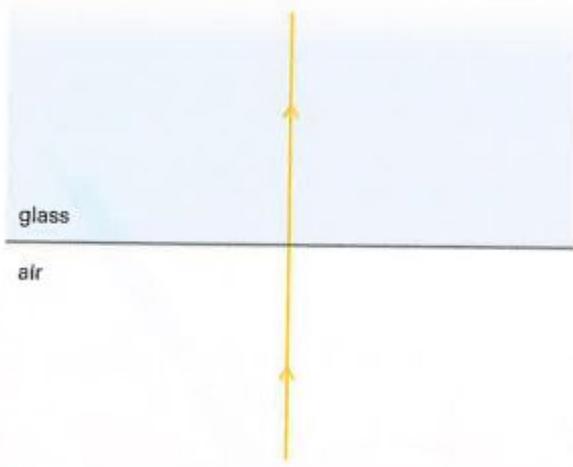


# Refraction of light

Teacher : Priti Shethia

# Refraction

The bending of rays of light when it travels from one material to another is called refraction of light



## Optically denser and rarer medium

The medium in which speed of light decreases as it enters that medium is called optically denser medium.

Water is optically denser when compared with air

The medium in which speed of light increases as it enters that medium is called optically rarer medium.

Air is optically rarer when compared with water

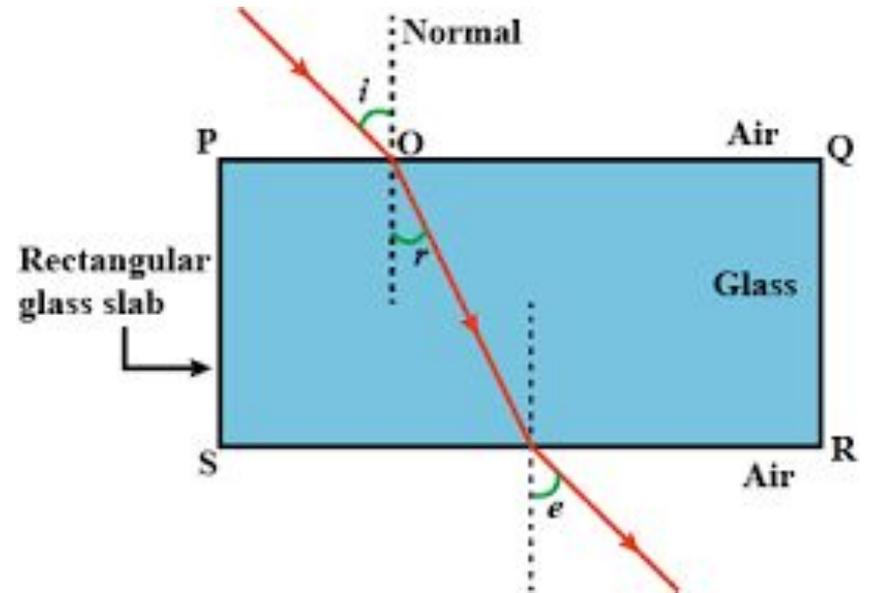
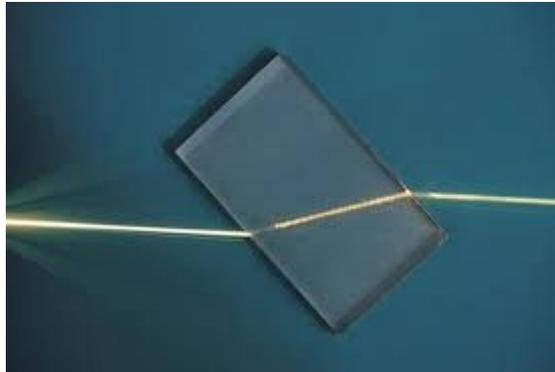
# Bending of rays of light

Rays of light bend towards the normal as it travels from optically rarer to optically denser medium.

Rays of light bend away from the normal as it travels from optically denser to optically rarer medium.

This is so because the speed of light is different in both mediums

# Bending of light continue ....



## Refractive index of material

$$\text{refractive index } n = \frac{\text{speed of light in a vacuum}}{\text{speed of light in the material}}$$

Refractive index is just a number – it has no units. This is because it is one speed divided by another – the units cancel out.

## Refractive index of material continue....

Material	Index of Refraction (n)
Vacuum	1.000
Air	1.000277
Water	1.333333
Ice	1.31
Glass	About 1.5
Diamond	2.417

# Snell's law

This law relates angle of incidence with angle of refraction.

