## Refraction

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  To know what is refratoite index first of all we will discuss what is refraction from 5 of 20
  Refraction is he bending of a wave when it enters a medium
- where its speed is different.
- The refraction of light when it passes from a fast medium to a slow medium bends the light ray toward the normal to the boundary between the two media.
- The amount of bending depends on the indices of refraction of the two media and is described quantitatively by Snell's Law.

- ► If i is the angle of incidence of a ray invacuum (angle between the incoming ray and the appendicular to the surface of a medium, called the nongal
  and r is the angle of refr
- angle of refraction (angle between the ray in the medium and the normal),
- ▶ the refractive index n is defined as the ratio of the sine of the angle of incidence to the sine of the angle of refraction; i.e.,

 $n = \sin i / \sin r$ .

Refractive index is also equal to the velocity of light c of a given wavelength in empty space divided by its velocity v in a substance, or n = c/v.

## Speed Of Light Faster In Air Or Water The speed of lighter laster in 20 ter.

- f water is 1.3 and the refractive index of veinde glass is 1.5
- From the equation n = c/v, we know that the refractive index of a medium is inversely proportional to the velocity of light in that medium.
- ► Hence, light travels faster in water.