

Speed of light :
 refractive index = $\frac{\text{speed of light in vacuum } (c)}{\text{speed of light through medium } (v)}$
 $n = \frac{c}{v}$ if $n \uparrow v \downarrow$

Wavelength :-
 Wavelength = $\frac{\text{speed of light } (c)}{\text{frequency}}$

$$\lambda = \frac{c}{f}$$

measured in a unit called Angstrom, $1 \text{ \AA} = 10^{-10} \text{ m}$

Speed of light :

Speed of light = frequency of light \times wavelength

$$c = f \lambda$$

Law of reflection :-

angle of incidence = angle of reflection

$$\theta_i = \theta_r$$

Snell's law :

$$\frac{n_1}{n_2} = \frac{\sin \theta_2}{\sin \theta_1}$$

$n_1 \Rightarrow$ index of refraction of first medium

$n_2 \Rightarrow$ index of refraction of second medium

$\theta \Rightarrow$ angle are measured from the normal.

frequency :

$$\text{frequency} = \frac{\text{speed of light } (c)}{\text{wavelength}}$$

$$f = \frac{c}{\lambda} \quad \text{or} \quad f = \frac{1}{T} \rightarrow \text{period or Time}$$

Wavelength :

Gamma rays **Shorter**

X-rays

ultraviolet

Visible

infrared

Radio **longer**

frequency :

Gamma rays **higher**

X-rays

ultraviolet

Visible

infrared

Radio **lower**

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