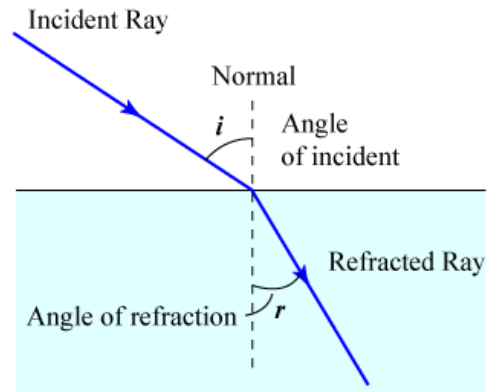


## Topic 5: Refraction

### Refraction:



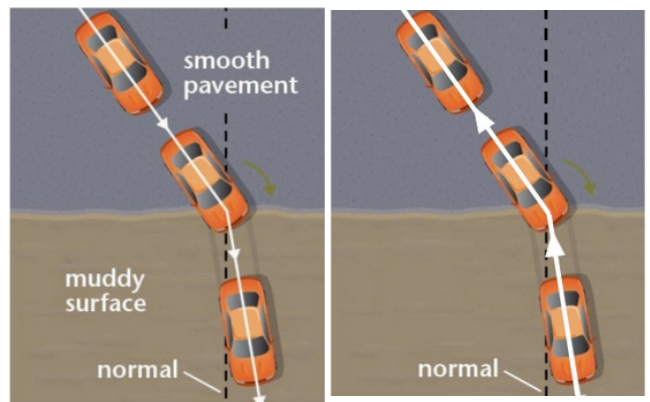
### Index of Refraction:

- $n$  = index of refraction (*no units*)
- $c$  = speed of light in a vacuum =  $3.00 \times 10^8$  m/s
- $v$  = speed of light in any medium (m/s)

Equation

Example: What is the speed of light in plastic if its index of refraction is 1.456?

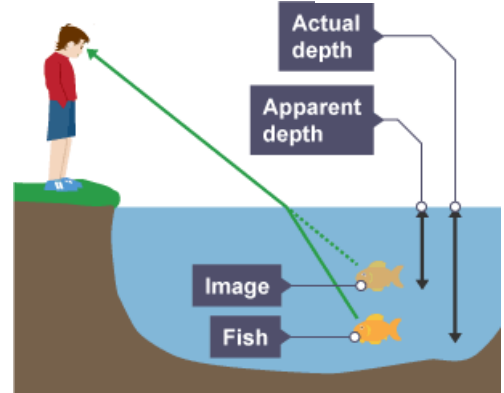
### Cause of Refraction:



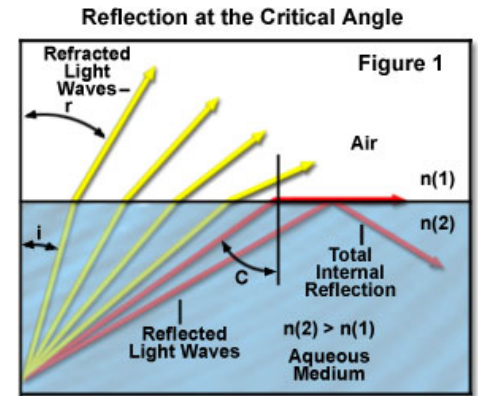
# Refraction Phenomena & Applications



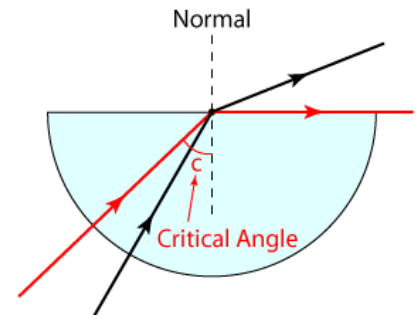
**Apparent Depth:**



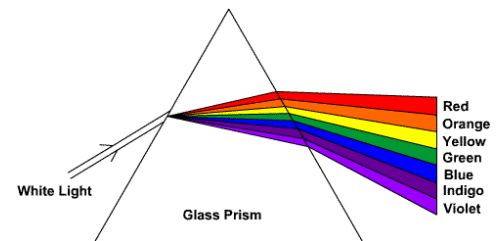
**Total Internal Reflection (TIR):**



**The Critical Angle:**



**TIR Examples:**



**Dispersion & Rainbows:**

