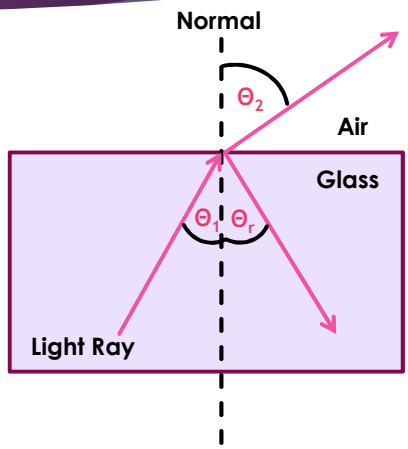
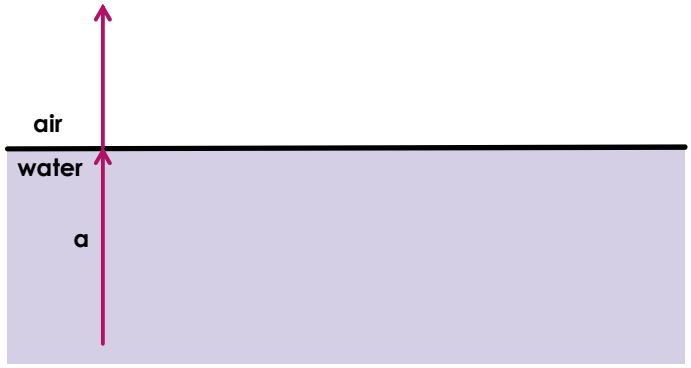
Total Internal Reflection

Internal Reflection

- We know that when light goes from one medium to another, light is refracted.
- Some light may also be reflected.
- $\Theta_1 = \Theta_r$ (Law of Reflection)

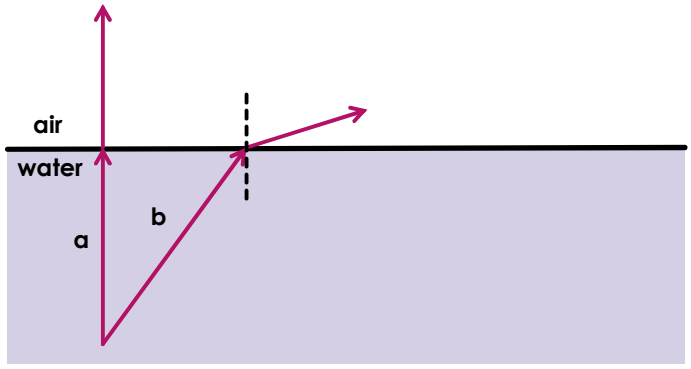


No Refraction



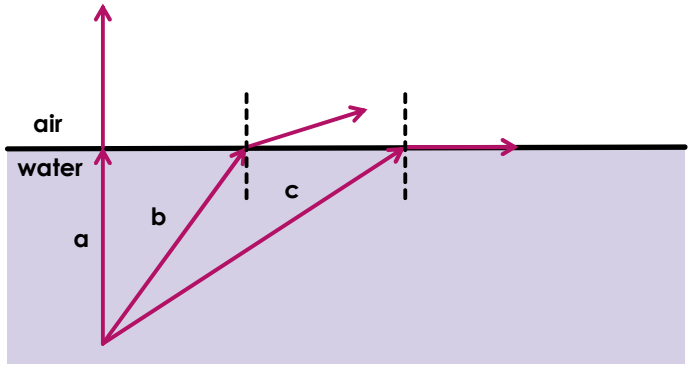
a. A ray entering at 0° to the normal passes straight through

Refraction



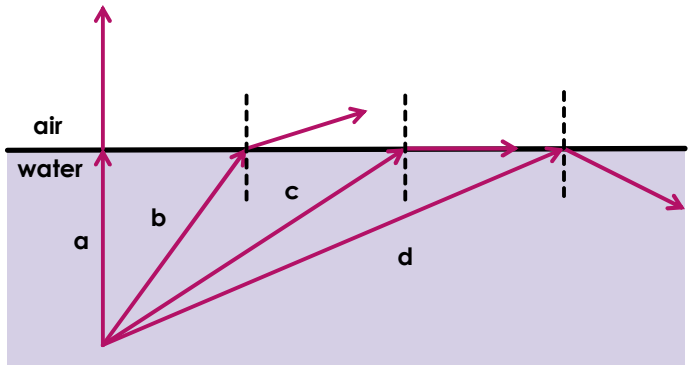
b. A ray entering at an angle will refract

Maximum Refraction



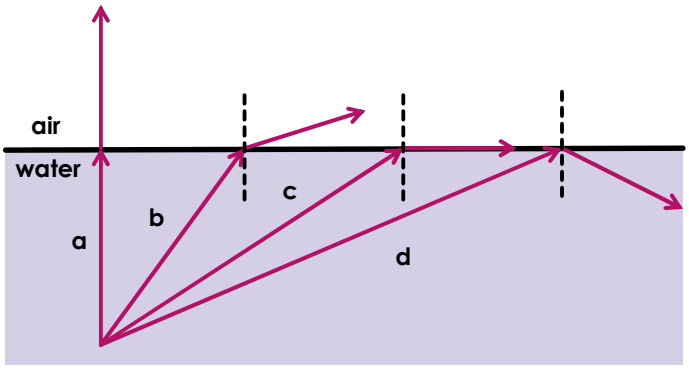
c. The maximum refraction is 90° and the angle of incidence at which this occurs is called the critical angle Θ_c

Total Internal Reflection



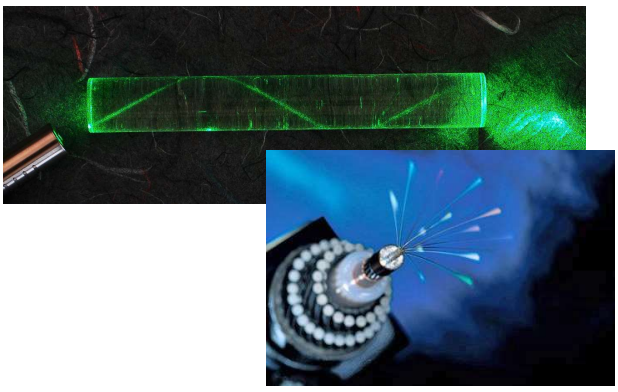
d. A ray entering at an angle greater than the critical angle, Θ_c, will experience total internal reflection.

One Last Time…



Applications of TIR

- Fibre Optics



Prisms

- **Binoculars**