The Direction of Refraction
Video Notes

Light rays refract when they cross a boundary between two media. The direction that light refracts depends upon the relative optical density (d), light speed (v), and index of refraction (n) of the two media.

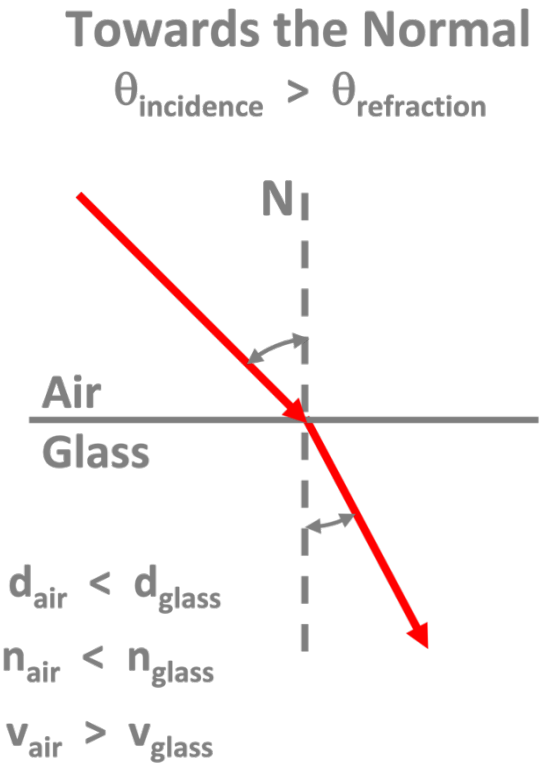
Consider the Air-to-Glass Boundary

Light refracts towards the normal line.

The angle in air > angle in glass (angles are measured between the light ray and the normal line).

This occurs when light passes from …

- less dense to more dense medium,
- small-n medium to large-n medium,
- or changes speed from fast to slow



Consider the Glass-to-Air Boundary

Light refracts away from the normal line.

The angle in glass < angle in air (angles are measured between the light ray and the normal line).

This occurs when light passes from …

- more dense to less dense medium,
- large-n medium to small-n medium,
- or changes speed from slow to fast