

Refraction Vocabulary

1. **Law of Reflection:** the angle of incidence will equal the angle of reflection



2. **Angle of incidence:** the angle measured from the incident ray to the normal (θ_i)
3. **Angle of reflection:** the angle measured from the reflected ray to the normal (θ_r)
4. **Normal:** a perpendicular dashed line to the barrier (see #1 picture)
5. **Refraction:** the bending of light going from one medium to another
6. **Index of refraction:** optical density of a substance (must be transparent or translucent). Represented by the letter "n", has no unit. $n = c/v$ (v = speed of light in a substance, cannot be greater than "c" (speed of light in a vacuum))
7. **Snell's law:** $n_1 \sin(\theta_1) = n_2 \sin(\theta_2)$ n_1 = substance that you are in; n_2 = substance you are (refracting) going into



8. **Law of Refraction:** Snell's law (see above)
9. **Total internal reflection:** an optical phenomena that occurs, complete reflection of a ray that is trying to refract out of an optical substance. The phenomenon occurs if the angle of incidence is greater than a certain limiting angle, called the critical angle. Occurs when going from a more optically dense substance to a less optically dense substance.
10. **Fiber optics:** a practical application of total internal reflection.
11. **Incoherent bundle:** light that spreads out ex. Flashlight (white light)
12. **Coherent bundle:** light that stays together ex. Laser light
13. **Primary colors:** (referring to light) they are red, green, blue; when combined they form (white light)
14. **Secondary colors:** (referring to light) they are cyan, magenta, yellow (printer colors); when combined they form (black light)
15. **Speed of light in a vacuum:** " c " = $3 \times 10^8 \text{ m/s}$ speed limit of the universe
16. **Spectrum colors:** ROYGBIV – red, orange, yellow, green, blue, indigo, violet

Reflection And Refraction Vocabulary Study Guide

Answer

Michael Rajnik



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