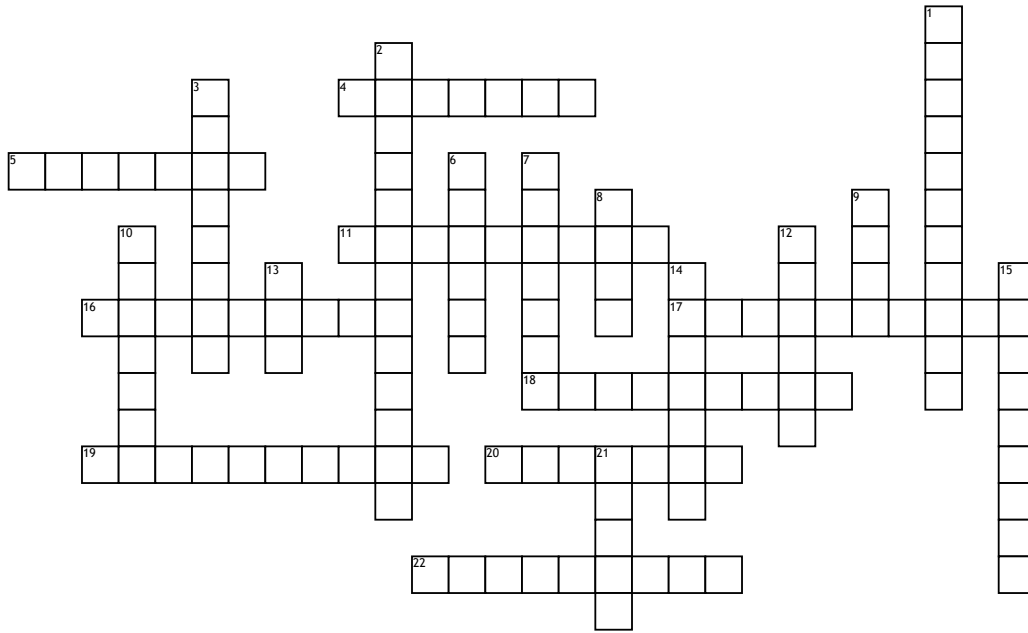


Total Internal Reflection



Across

- 4. Passing from air to water, light bends _____ the normal.
- 5. Optical fibers are inserted into the body for visibility during _____.
- 11. As optical density of a medium increases, the refractive index of the medium _____.
- 16. In diagram 5, which paths would light incident on water from air follow?
- 17. The bending of light.
- 18. The critical angle is the smallest angle wherein light rays passing between mediums are no longer _____ but totally reflected.
- 19. The angle of _____ is equal to the angle of incidence.
- 20. In diagram 2, the blue angle is _____ than the green angle.

- 22. The angle between the normal and incoming light ray is the angle of _____.

Down

- 1. Transmission of light is also referred to as the _____ of light.
- 2. Optical fibers use the total internal reflection of light pulses as signals for _____.
- 3. Light travels in _____ lines.
- 6. The line at perpendicular to a surface.
- 7. In diagram 4, both the blue and green angles are _____ than the critical angle.
- 8. In diagram 1, some of the light is transmitted out of the fiber at P because the angle of incidence is _____ than the critical angle.
- 9. In diagram 6, which incident ray produces total internal reflection?

- 10. When the bottom surface of a diamond reflects light back up to the top through total internal reflection, it will _____.
- 12. In diagram 3, both the blue and green angles are _____ than the critical angle.
- 13. The path of light.
- 14. Total internal reflection requires an angle of incidence to be _____ than the critical angle.
- 15. An _____ is the boundary between two mediums.
- 21. Total internal reflection requires light passing into _____ density mediums.

Word Bank

- | | | | | |
|------------|--------------|----------|----------------|------------|
| normal | towards | greater | propagation | lower |
| less | smaller | surgery | smaller | interface |
| reflection | ray | straight | incidence | ray C |
| refracted | larger | sparkle | communication. | refraction |
| increases | Path A and C | | | |