

# OAKRIDGE INTERNATIONAL SCHOOL

**Subject :    PHYSICS                  MYP 4**

**Topic:    Refraction    \_ Refractive Index**

- 1. For which medium is the refractive index the least ?*
- 2. Can absolute refractive index of any material be less than one?*
- 3. Why do we not see the actual depth of a lake?*
- 4. The refractive index of carbon di sulphide is 1.63. What is the meaning of this statement in relation to the speed of light?*
- 5. How should a ray of light be incident on a rectangular glass slab so that it comes out from the opposite side of the slab without being displaced?*
- 6. A ray of light enters a rectangular glass slab of refractive index 1.5. It is found that the ray emerges from the opposite face of the slab without being displaced. If its speed in air is  $3 \times 10^8$  m/sec then what is its speed in glass?*
- 7. The speed of light in a transparent medium is 0.6 times that of its speed in vacuum . What is the refractive index of the medium?*
- 8. Arrange the following media in the order of increasing optical density . Given the refractive index of air, glass, kerosene, diamond are 1, 1.5, 1.44 and 2.42 respectively.*
- 9. Define refractive index of a transparent medium .What is its unit? Which unit has a higher refractive index , glass or water?*
- 10.. You are given kerosene , turpentine and water . In which of the se does the light travel faster ? Given refractive indices of kerosene , turpentine and water are 1.44,1.47 and 1.33 respectively.*