



CHECK YOUR LEARNING

1. Refraction is the change in direction of a light beam that occurs when the light enters a new medium.
2.
 - (a) When light enters a new medium, its speed changes causing the light to travel in a new direction. Light bends toward the normal if its speed is slower in the new medium and away from the normal if its speed is greater in the new medium.
 - (b) In order for light to be refracted, it must travel from one transparent medium into another, and light must have a different speed in each medium.
 - (c) Light must have a slower speed in water than in air because light bends toward the normal when it enters water from air.
3.
 - (a) Medium A is air and medium B is ice. When light passes from one medium into another, its path will be closer to the normal in the medium where light's speed is slower, so medium B must be ice.
 - (b) The diagram does not show the direction in which the light is travelling, but this does not matter because the light would follow the same path going either way.
4.
 - (a) away from the normal
 - (b) toward the normal