

Name _____

Sound Waves vs. Light Waves: A Journey into the World of Waves

Short Answer Key

1. Sound waves require a medium (such as air, water, or a solid) to travel, while light waves do not require any medium and can propagate through a vacuum.
2. The color of a light wave is determined by its frequency. Higher frequencies correspond to colors like violet and blue, while lower frequencies produce colors like red and orange.
3. You can't hear sounds in outer space because there is no air or medium for sound waves to travel through.
4. When a sound wave passes through air, the air particles compress (move closer together) and rarefy (move farther apart) as the wave moves through.
5. The speed of sound varies in different mediums. It is faster in denser mediums like water than in less dense mediums like air.

