

Wave Behaviors in Light and Sound

1. What causes sound waves to form?

- A. Vibrations of particles in a medium
- B. Movement of light through space
- C. Reflection of sunlight off surfaces
- D. The motion of electric currents

2. Which type of wave is a sound wave?

- A. Transverse wave
- B. Longitudinal wave
- C. Electromagnetic wave
- D. Surface wave

3. Light waves are what type of wave?

- A. Mechanical
- B. Longitudinal
- C. Electromagnetic
- D. Sound

4. When a sound wave bounces off a surface and returns to the listener, it's called a(n):

- A. Refraction
- B. Reflection
- C. Diffraction
- D. Absorption

5. When light bends as it passes from air into water, it is showing which wave behavior?

- A. Reflection
- B. Diffraction
- C. Refraction
- D. Interference

6. What happens when light hits a smooth, shiny surface like a mirror?

- A. It refracts
- B. It reflects
- C. It diffracts
- D. It absorbs

7. What does the wavelength of a wave measure?

- A. The number of waves that pass in one second
- B. The distance between two corresponding points on a wave
- C. The height of the wave from rest position
- D. The amount of energy the wave carries

8. How does wavelength relate to frequency?

- A. Longer wavelengths have higher frequencies
- B. Wavelength and frequency are not related
- C. Shorter wavelengths have higher frequencies
- D. Wavelength increases as frequency stays the same

9. Which type of wave has the longest wavelength in the electromagnetic spectrum?

- A. X-rays
- B. Radio waves
- C. Ultraviolet light
- D. Gamma rays

10. What is the highest part of the wavelength called?

- A. Amplitude
- B. trough
- C. resting point
- D. Crest