Name _____

Waving Hello to Differences: Transverse and Longitudinal Waves

Multiple Choice Questions

1. In which type of wave do particles of the medium move perpendicular to the wave's direction?

A) Transverse wave

B) Longitudinal wave

C) Electromagnetic wave

D) None of the above

2. What is the main difference in particle motion between transverse and longitudinal waves?

A) Particles move in circles in transverse waves and back-and-forth in longitudinal waves.

B) Particles move parallel to the wave's direction in transverse waves and perpendicular in longitudinal waves.

C) Particles move in zigzag patterns in transverse waves and side to side in longitudinal waves.

D) Particles move at random in both types of waves.

3. Which of the following is an example of a longitudinal wave?

A) Ocean wave

B) Light wave

C) Sound wave

D) Seismic S-wave

4. How do transverse waves and longitudinal waves differ in terms of wave shape?

A) Transverse waves have regions of compression and rarefaction; longitudinal waves have crests and troughs.

B) Transverse waves have crests and troughs; longitudinal waves have regions of compression and rarefaction.

C) Both transverse and longitudinal waves have crests and troughs.

D) Both transverse and longitudinal waves have regions of compression and rarefaction.

5. What is the main similarity between transverse and longitudinal waves?

A) They both require a medium to travel through.

B) They both have crests and troughs.

C) They both move at the same speed in all materials.

D) They both have particles moving in circles.