

Name _____

Shaking It Up: Different Types of Seismic Waves from Earthquakes

Short Answer Key

1. Primary waves (P-waves) involve both compressional (push-pull) and expansion (stretching) motions during an earthquake. They can travel through solids, liquids, and gases but at different speeds.
2. Secondary waves (S-waves) cannot travel through liquids or gases because they involve a shearing motion that requires a solid medium for transmission. They help scientists understand the Earth's composition and layers.
3. Love waves and Rayleigh waves are types of surface waves. Love waves cause side-to-side shaking motion, while Rayleigh waves create both rolling and up-and-down motions on the Earth's surface. They contribute to ground shaking during an earthquake.
4. Seismic waves are essential for studying the Earth's subsurface structure, including the distribution of materials and boundaries between layers. By analyzing seismic waves, scientists gain insights into the Earth's composition and tectonic processes.
5. Answers will vary but may include taking cover, moving away from windows, securing heavy objects, and practicing earthquake drills.

