

Name _____

Shaking It Up: Different Types of Seismic Waves from Earthquakes

Open-Ended Response Answer Key

1. Answers will vary depending on the historical earthquake event discussed. Include details about the types of seismic waves produced and their impact on the affected area.
2. Seismic waves are used to study the Earth's interior by analyzing their speed, direction, and interactions with different materials. This information helps scientists understand the Earth's composition, layers, and tectonic activity.
3. Understanding seismic waves is crucial for earthquake preparedness and building construction in earthquake-prone regions. It informs building codes, structural engineering, and early warning systems, reducing the impact of earthquakes on communities.
4. Seismic waves play a key role in earthquake early warning systems by providing information about the earthquake's location, magnitude, and expected shaking intensity. Early warning systems can provide valuable seconds to minutes of advance notice, allowing people to take protective actions and evacuate if necessary.

