

Name _____

Waving Hello to Differences: Transverse and Longitudinal Waves

Open-Ended Response Questions

1. Imagine you are an engineer tasked with designing a new musical instrument. Explain how your understanding of transverse and longitudinal waves can help you create unique and interesting sounds.
2. Compare and contrast the properties of transverse and longitudinal waves in terms of energy transfer and medium interaction. Provide real-world examples for each type of wave.
3. How do the differences between transverse and longitudinal waves play a crucial role in the field of seismology (the study of earthquakes)? Provide insights into how scientists use this knowledge to understand seismic waves.
4. Think about the way our ears perceive sound. Explain how the motion of air particles in a sound wave relates to the pitch and volume of the sound we hear.

