

Name _____

Riding the Wave: The Power of Amplitude in Wave Physics

Open-Ended Response Questions

1. Imagine you are a musician designing a new instrument. How could you use your knowledge of wave amplitude to create a unique and versatile sound? Provide examples of how varying amplitudes can influence the instrument's sound.
2. Compare and contrast the role of amplitude in sound waves and light waves. Explain how amplitude affects our experiences with both types of waves and provide real-world examples.
3. Consider the field of radar technology, which uses amplitude to detect objects and measure distances. Explain how radar systems utilize amplitude information and how this technology benefits various applications, such as aviation and weather forecasting.
4. Reflect on the importance of understanding wave amplitude in the field of medicine, particularly in the use of medical imaging techniques. Discuss how adjusting amplitude settings can enhance the quality of medical images and aid in diagnosis.

