Name _____

Riding the Wave: The Power of Amplitude in Wave Physics

Multiple Choice Questions

1. What does wave amplitude refer to?

A) The number of wave cycles per second

B) The distance between two consecutive troughs

C) The maximum distance a particle in a wave moves from its resting position

D) The speed at which a wave travels through a medium

2. How does wave amplitude relate to wave intensity?

A) Larger amplitudes result in less intense waves.

B) Smaller amplitudes result in more intense waves.

C) Larger amplitudes result in more intense waves.

D) Amplitude has no effect on wave intensity.

3. What role does amplitude play in the perception of sound waves?

A) It affects the color of the sound.

B) It determines the frequency of the sound.

C) It influences the volume or loudness of the sound.

D) It has no impact on sound perception.

4. In the context of light waves, what does a higher amplitude indicate?

A) Brighter light

B) Dimmer light

C) A change in color

D) Faster wave speed

5. What is wave interference, and how can it affect amplitudes when waves overlap?

A) Wave interference is the change in frequency when waves meet. It increases amplitudes.

B) Wave interference is the bending of waves when they pass through different mediums. It decreases amplitudes.

C) Wave interference is the interaction of waves when they meet. It can result in amplitudes that combine or cancel out.

D) Wave interference is the reflection of waves off a surface. It has no effect on amplitudes.