Name _____

The Dance of Waves: Understanding the Relationship between Wave Speed, Frequency, and Wavelength

Short Answer

1. Explain the relationship between wave speed and wavelength, using the example of waves at the beach.

2. How does changing the length of a guitar string affect its wavelength, frequency, and pitch?

3. If a wave has a frequency of 60 Hz and a wavelength of 2 meters, calculate its wave speed using the equation.

4. In radio broadcasting, why is it important to use specific frequencies for different stations, and how does this relate to wave speed?

5. Provide an example of a real-world application where understanding the relationship between wave speed, frequency, and wavelength is crucial for achieving a specific goal.