|  |  |  |
| --- | --- | --- |
| Name: | Class: | Date: |

**Science 8 - 4.1 Properties of Waves**

**Goals:**

1. To be able to understand the relationship between energy, frequency, and wavelength
2. To be able to calculate the amplitude and frequency
3. To be able to differentiate between transverse and compression waves

**Properties of Waves**

* A wave is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or movement that transfers energy through matter or space. Energy is the capacity to move an object.
* Wavelength is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the wave from crest to crest or trough to trough.
* Amplitude is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a wave crest or the depth of a wave trough, as measured from rest position.
* Frequency is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of repetitive motions, or oscillations, that occur in a given time. Frequency is measured in hertz (Hz), or \_\_\_\_\_\_\_\_\_\_\_\_\_\_ per second

**Think about it (p. 138)**



* As wavelength decreases, the frequency \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Two types of waves**

* In a transverse wave, matter in the medium moves back and forth, perpendicular to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that the wave travels.
* In a compression wave, matter in the medium moves back and forth along the same direction that the wave \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



