Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_

Directions:

Correctly complete each portion of the chart below.

**Mechanical Wave Chart:**

|  |  |  |
| --- | --- | --- |
|  | Transverse Wave | Longitudinal Wave |
| Description of the Wave |  |  |
| Picture of the wave  (Label the compression and rarefraction zone of a longitudinal wave)  (Label Crests and troughs on the transverse wave) |  |  |
| Type of energies that act as that wave |  |  |
| Amplitude  (draw the wave, color the amplitude Red, and label it on your drawing) |  |  |
| Wavelength  (draw the wave, color the wavelength green, and label it on your drawing) |  |  |

2. Describe Frequency of a wave and draw a picture that represents it below.

3. What are waves? List all the factors that determine the speed of a wave?

|  |  |
| --- | --- |
| Medium | Rank in order of fastest to slowest wave speed  (fastest being 1 and slowest 6) |
| Cold solid |  |
| Cold Liquid |  |
| Hot Solid |  |
| Hot Liquid |  |
| Cold gas |  |
| Hot gas |  |

4. Draw a transverse wave with small wavelengths

5. Draw a transverse wave with big wavelengths.

6. Which transverse wave, in question 4 or 5, has a higher frequency? Why?