**7th Grade Science Homework Menu Week #16**

Directions: You are to perform the following tasks on SEPARATE SHEETS OF PAPER and submit on Friday, February 13th. Each task is worth a specific amount of points. You NEED TO COMPLETE 20 POINTS worth of Homework to receive full credit.

**1. Define the following terms: (5 Points)**

a. wave (our working definition from class)

b. crest

c. trough

d. amplitude

e. frequency

f. wavelength

g. transverse wave

h. longitudinal wave

2. **Longitudinal or Transverse Wave (5 Points)**

Identify rather each wave would be classified as transverse or longitudinal wave

a) A slinky that moves up and down making s-shapes: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
b) A pulse sent from one end of a slinky to the other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) A sound wave: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) A worm moving: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) People doing “the wave”: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.**Wave Comparison (5 Points)**

Write a paragraph comparing transverse and longitudinal waves. Include AT LEAST three differences between them, and two examples of each.

4. **Parts of a Wave (5 Points)**

1. A radio station broadcasts at a frequency of 10Hz and a wave speed of 500 m/s. What is the **wavelength** of the radio waves?

1. A wave has a frequency of 3 Hz and a wavelength of 9 m. What is the **wave speed** (or velocity)?
2. What is the **frequency** of a wave if it has a velocity of 88 m/s and a wavelength of 11 m?
3. Draw a picture of a wave

-Label the amplitude, wavelength, crest, and trough -Include the resting position -Use arrows when necessary

5. **Additional Wave Practice (5 Points)**

1) How do we know that waves transfer energy?

* 1. Waves are very energetic c) All waves are loud
  2. Waves are capable of doing work d) All waves are created by the electromagnetic force

1. What is a medium?
   1. A clothing size c) A type of energy
   2. The matter that waves travel through d) The electrons that make up a wave
2. A bigger wave carries less energy Circle one: TRUE FALSE
3. What medium do ocean waves travel through? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Tell me a situation where a wave is doing work: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_