**7th Grade Science Homework Menu Week #17**

Directions: You are to perform the following tasks on SEPARATE SHEETS OF PAPER and submit on Friday, March 14th. 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. Doppler effect

b. Diffraction

c. absorption

d. reflection

e. refraction

f. doppler effect

2. **Wave Math Practice Problems (5 Points)**

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?

A wave has a frequency of 3 Hz and a wavelength of 9 m. What is the **wave speed** (or velocity)?

What is the **frequency** of a wave if it has a velocity of 88 m/s and a wavelength of 11 m?

Draw a picture of a wave

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

3.**Frequency, Pitch, & Wavelength (5 Points)**

Write a paragraph describing the relationship between frequency, pitch and wavelength. Give an example of something with a high pitch and something with a low pitch. What do you know about their frequency and wavelength?

4. **Electromagnetic Spectrum (5 Points)**

Write 1-2 paragraphs explaining the **electromagnetic spectrum** to a friend. Provide a definition, examples of waves, and the relationship between the waves (for example, compare specific waves to each other).

5. Answer the following **Doppler Effect** questions **(5 Points)**

1) What does the Doppler Effect tell us about the observed frequency of a wave?

2) Give your own example of the Doppler Effect in your every day life. Explain why this is a good example!