Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sound and Light Treasure Hunt

!. What is a wave? (Give a Scientific definition and then put it into your own words.)

Scientific Definition –

Your Definition –

2. Fill each box with a sentence.

|  |  |  |
| --- | --- | --- |
|  | Transverse Waves | Longitudinal Waves |
| They are the same because |  |  |
| They are different because |  |  |

3. Define the following terms:

a. Crest-

b. Trough –

c. Amplitude –

d. Wavelength -

e. Frequency –

4. What does the abbreviation Hz stand for

5. Write three sentences about what you see when you change the variables

**Part 2: Sound**

6. What is pitch?

7. Draw a wave with a high pitch and one with a low pitch.

8. Observe the graphs on the webpage. What is the difference between a pleasant sound and a noise?

**Part 3: Light**

9.) List the seven types of electromagnetic waves from largest to smallest freguency:

10. What is the speed of light through these different materials? (in miles per second)

Air -

Water –

Crown Glass –

Diamond -

11. What material does light move through the fastest? Why do you think light can move through it the quickest? (Be sure to use the term molecules in your explanation.)

12. List green, blue, and red light in order of their wavelengths from shortest to longest:

13. What effect does amplitude have on color?

14. Write a short reflection (at least one paragraph) about your experience on this web quest. Write it on the back of this page. Be sure to include **TWO THINGS YOU LEARNED** and **TWO THINGS YOU STILL HAVE QUESTIONS ABOUT.**