**Earthquake Rescue Plan Study Guide**

**Define the following vocabulary words (Refer to Pitch and Frequency vocab station)**

-Pitch (glass bottle lab) -Sound Waves -crest

-Mechanical waves (Fundamentals of Waves) -digital signal -wavelength

-Electromagnetic waves (fundamentals of Waves) -Analog signal -amplitude

-Frequency (Fundamentals of Waves) -medium -Oscilloscope

-Trough -Tinnitus

**Answer the following questions.**

1. What kind of vibrations makes a low and high pitched sound? (Glass bottle lab)

2. When you put more water into the bottle, there is \_\_\_\_\_\_ air to vibrate. This means the air will vibrate faster and the sound is \_\_\_\_

3. What causes ringing in the ears?

\_\_\_\_\_. (Glass bottle lab)

4. How is sound created?

5. Draw a picture of a longitudinal wave.

6. Draw a picture of a transvers wave.

7. Describe the particle movement in a longitudinal wave.

8. Describe the particle movement in a transverse wave.

9. What medium do sounds travel the fastest through?

10. During Station 1: Tuning forks, why did the ping pong ball move and the water splash when they came in contact with the fork?

11. During Station 4: Whirly Whirly, you explored how sound was created by a glass. What caused the sound when running your finger around the rim of the glass?

12. What happens to the frequency of the waves as the Hertz measurements increase? (Tuning Forks)

13. When you were tapping on the glass bottles; what was vibrating to make the sound?

14. When you were blowing into the bottle; what was vibrating to make sound?

15. What part of your ear helps you keep balance?

\*\* You will have to identify frequency (high and low), amplitude (high and low) and wavelength in a picture\*

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| Question: What Medium does sound travel fastest through? |
| Claim: |
| Lab evidence: |
| Research Evidence: |
| Reasoning (explain how your evidence support your claim)  \*\*Remember to include your sources\*\* |