Discuss and Write

- **Discuss at your table groups how to complete these sentences. Use wave properties vocabulary.**
- **Write them in your notebook**

The higher the _____ ,
the higher the volume or loudness.
The higher the _____,
the higher the pitch or tone.

Discuss and Write

- **Discuss at your table groups how to complete these sentences. Use wave properties vocabulary.**
- **Write them in your notebook**

The higher the AMPLITUDE , the higher the volume or loudness.
The higher the FREQUENCY, the higher the pitch or tone.

Human Hearing

Humans can typically hear frequencies in the range of 20 Hz → 20,000 Hz.

Make this table in the next clean space in your notebook.

Animals	Frequency Difference	Infrasound (I) or ultrasound (U)
Elephants, Moles		
Cats, Dogs		
Dolphins, Bats		

Vocabulary - Waves

Please write these words on the first clean SPACE in your notebook

Bel (B) - a unit that measures the intensity /volume of a sound.

Decibel (dB) = 1/10 bel

Assignment

[89] It's a Noisy World :

1. Read F-4
2. Procedure - Work as a table group to complete the table on F-5. ***Ex. proportion: A = 1/10,000***
3. Continue Working through the procedure
4. **Add an <u>extra empty column</u> to the table on F-6.**
5. Answer the analysis questions in your notebook.

Discuss and Write

1. **Choose the correct answer.**

An increase from 10-20 decibels means:

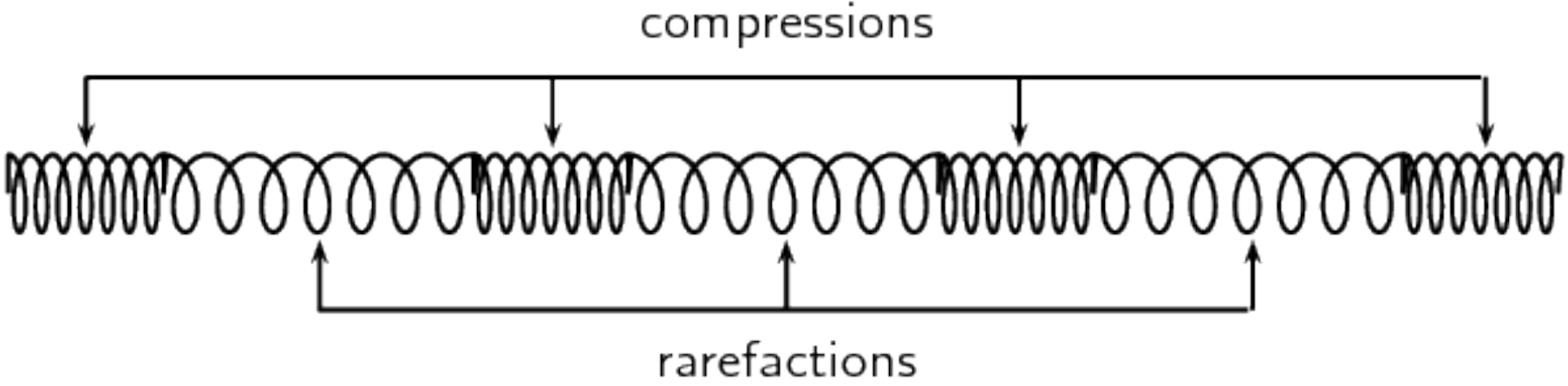
a. The volume has been cut in half
b. The volume has increased 10X
c. The volume has doubled

2. **Answer in your notebook**

Why would increasing your headphone volume from 80-90 dB be such a problem?

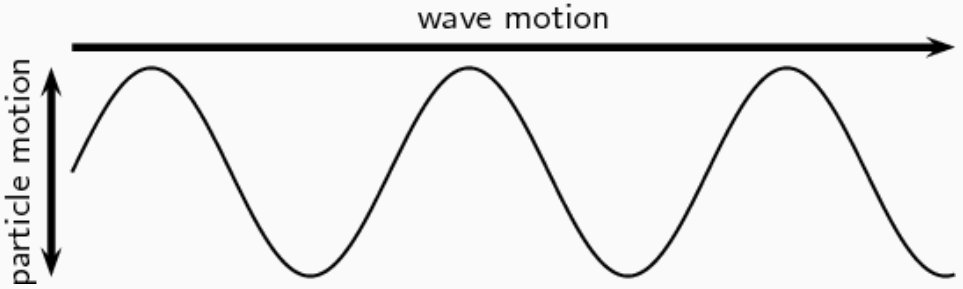
Practice sketching this on the scratch paper on your table. Skip the labels and arrows for now.

Please recycle them when we are done.

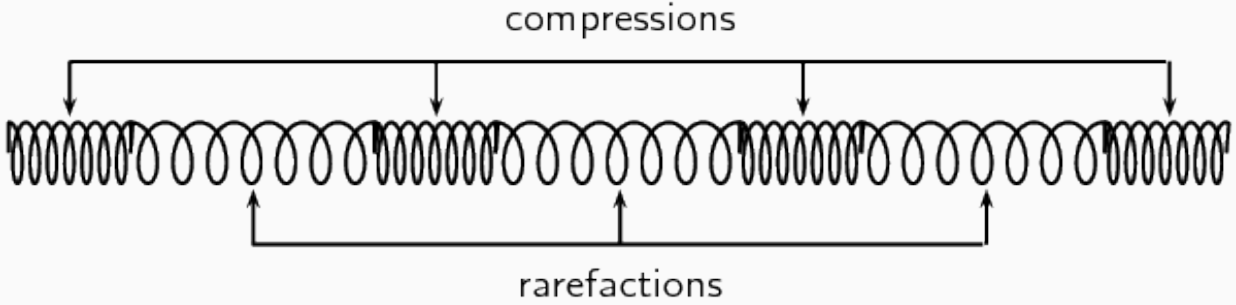


Please write these definitions and images onto the next clear space in your notebook

<u>Transverse wave</u> - moves (oscillates) at a 90 ° angle to the motion of the wave.



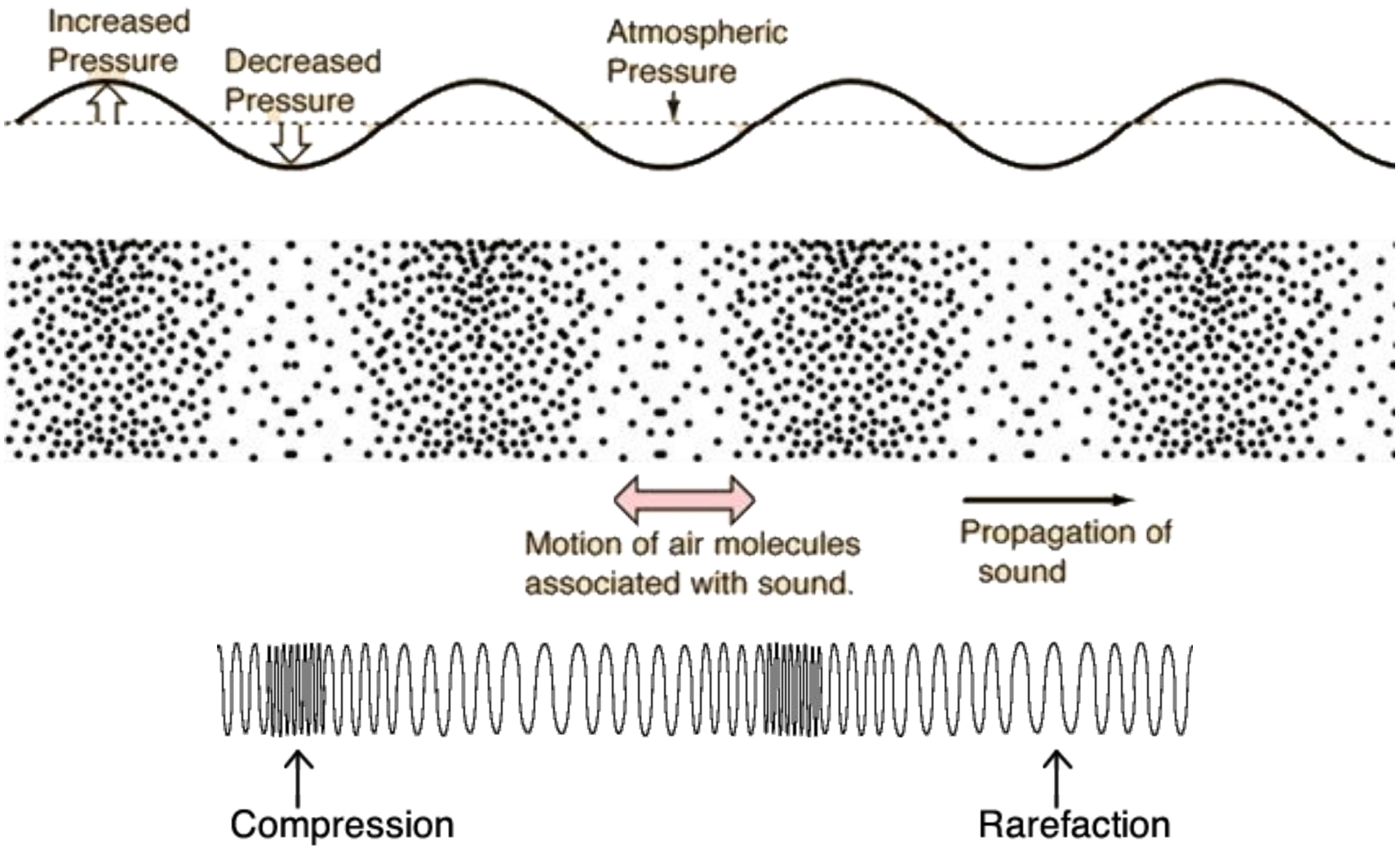
<u>Longitudinal Wave</u> - moves (oscillates) in the direction of its wave motion



Assignment

From the videos: *on the first clean SPACE in your notebook*

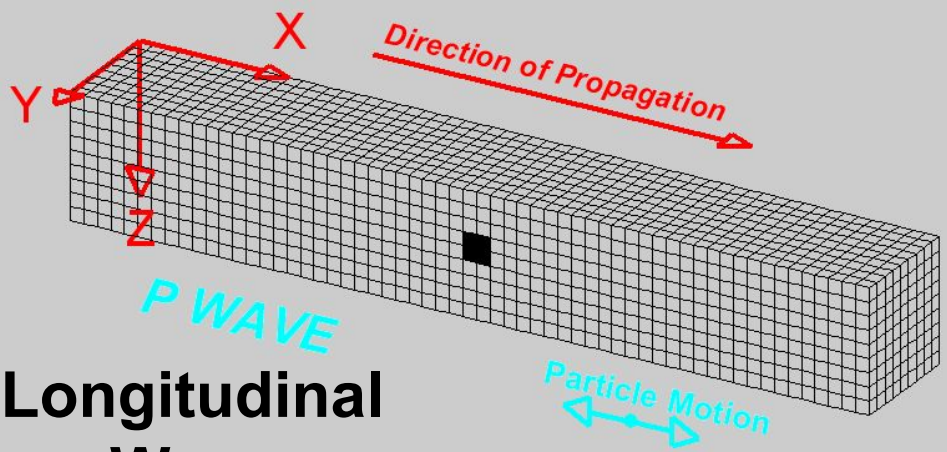
1. Describe how sound waves move through a medium.
2. What is frequency and how does it affect pitch or tone?
3. What determines the volume or intensity of a sound?


Increased Pressure
Decreased Pressure
Atmospheric Pressure
Motion of air molecules associated with sound.
Propagation of sound
Compression
Rarefaction

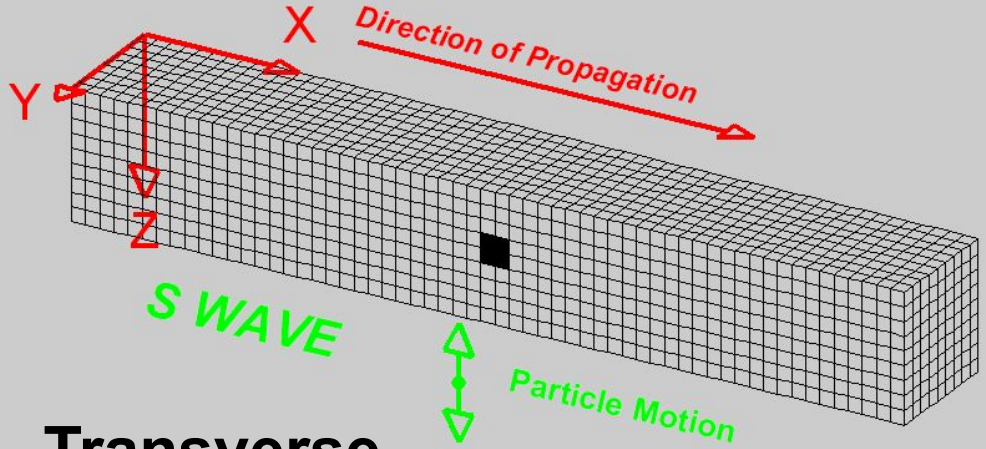
When the earth shifts during an earthquake, energy in the form of waves moves through the rock in different ways.

Please answer in your notebook

1. How are the waves moving differently through the rock? Describe how the black square is moving.



Longitudinal Wave

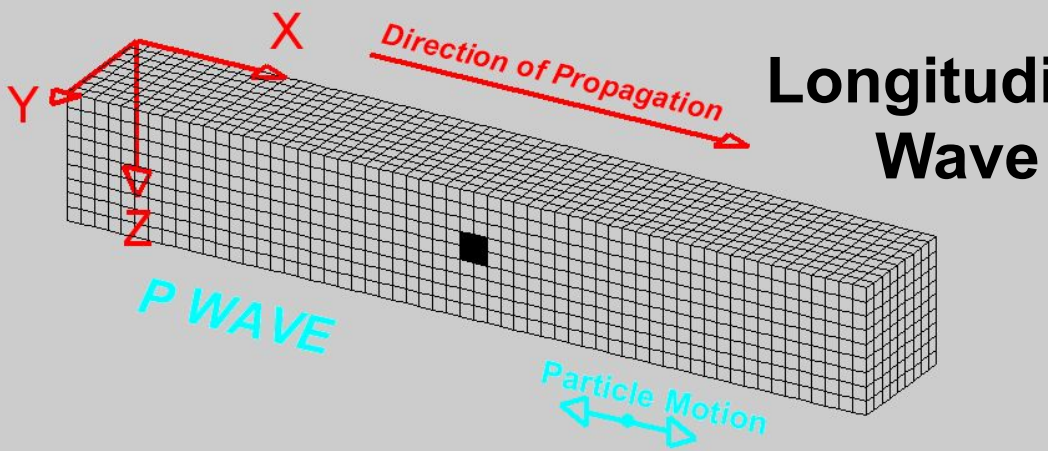


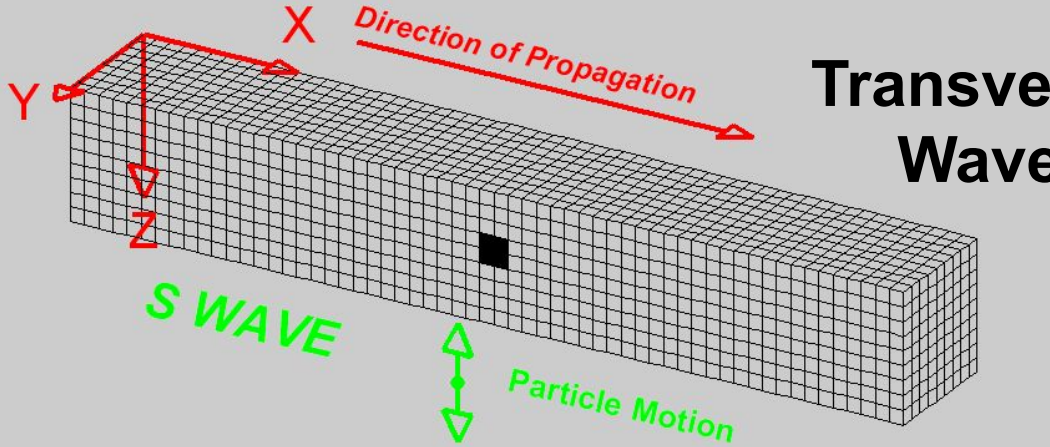
Transverse Wave

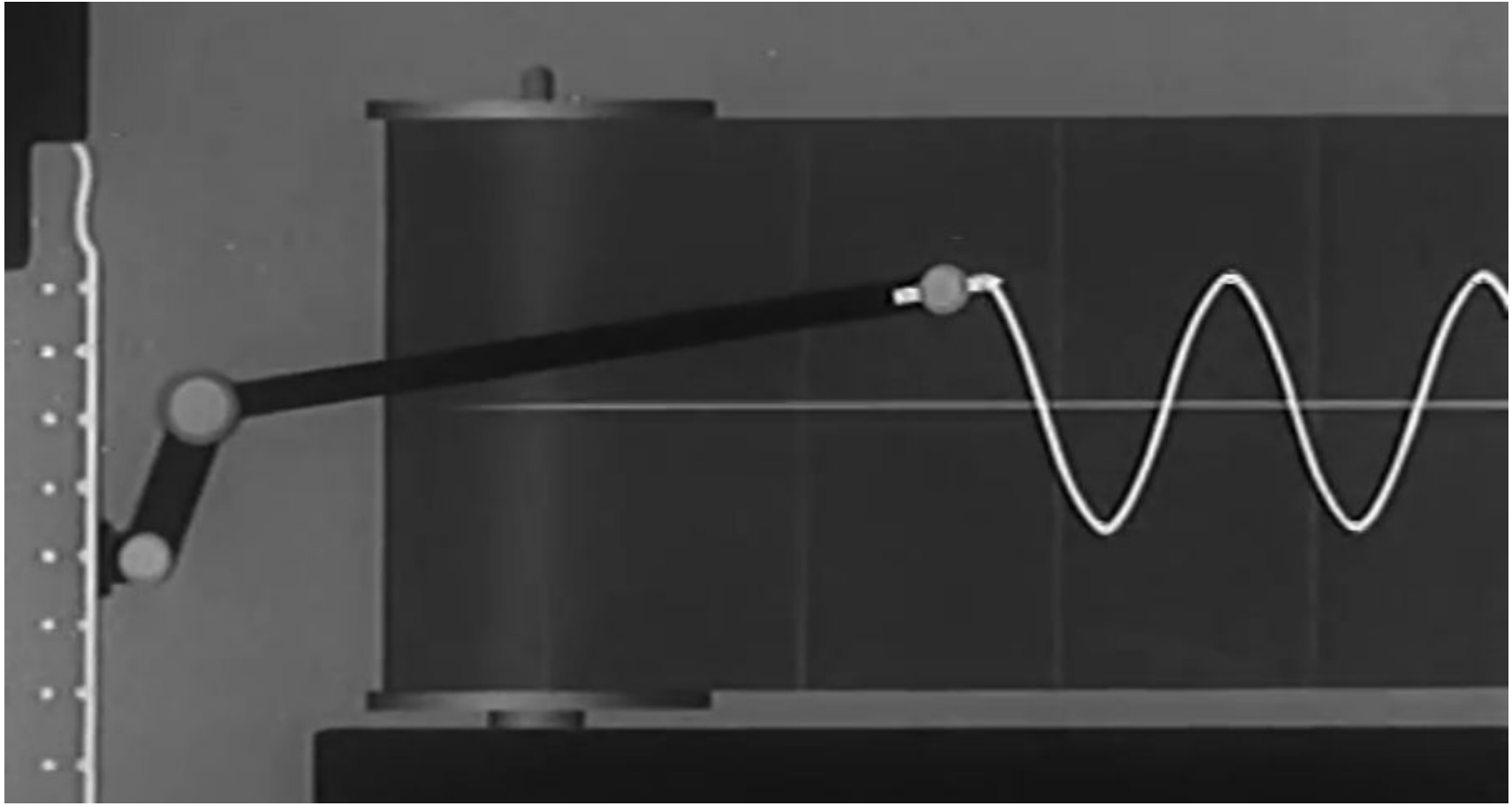
When the earth shifts during an earthquake, energy in the form of waves moves through the rock in different ways.

Please answer in your notebook

1. P waves are faster than s waves.
   Why do you think this is true?







Discussion

- **Come up with an idea**
- **Discuss with your table group**
- **Write your prediction in your notebook**

Light waves can travel through empty space. Sound waves cannot.

Why do you think this happens?