



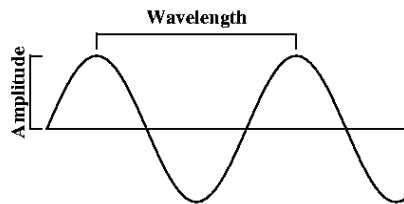
Sound Notes

All sounds start with a _____

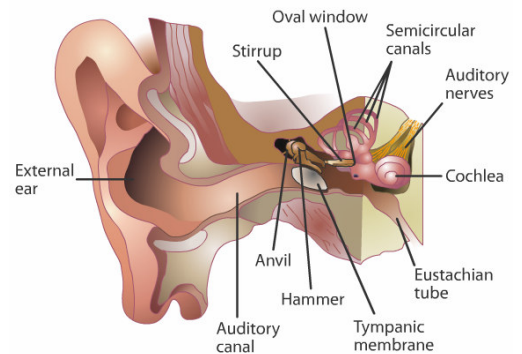
What type of mechanical wave is sound? _____.

How do the particles of the wave vibrate? _____

What does this sine wave tell us about the sound it represents?



Briefly explain how the human ear works:



What is the audible frequency range for human hearing?

Explain *infrasonic* and *ultrasonic*:

What is *pitch*? How does it differ from *frequency*?

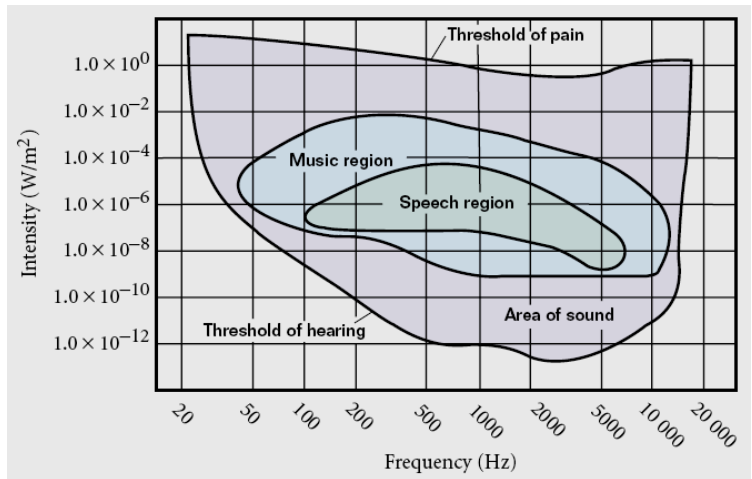
Speed of sound, what does it depend on? What is its speed in air? In seawater?

Explain the *Doppler effect*:

What is *sound intensity*? Equation? Units?

Why and how does intensity change with distance from the source?

What does this graphic tell you?



Why is a **log scale** needed to measure sound intensity?

The intensity of a wave approximately determines its _____.

What is **relative sound intensity**? Units?

Compare the intensities of the following sound pairs

10 dB and 13 dB _____; 50 dB and 60 dB _____; 50 dB and 80 dB _____

Calculate the relative sound intensity for:

Threshold of hearing

A quiet whisper

A vacuum cleaner