

Key Words

Vibration	A repeating back and forth movement	Oscilloscope	A machine that can view sound waves as electronic signals
Volume	How loud or quiet a sound is (decibels, Db)	Absorption	Energy being transferred from sound to a material
Longitudinal Wave	A vibration moving in the same direction as the wave	Auditory Range	The highest and lowest frequencies that an animal can hear
Pitch	How low or high a sound is	Echo	Reflection of sound waves back to the listener
Frequency	Number of waves in a second (hertz, Hz)	Vacuum	A space with no particles of matter in

Learning Sequence

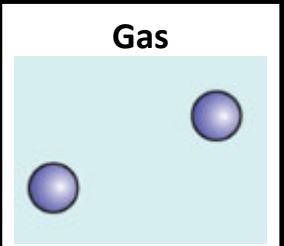
1. Sound and Volume
2. Pitch
3. Sound Waves
4. The Ear
5. Travelling Sounds
5. Reflection and Absorption

Assessment

- Bar chart
- End of topic test

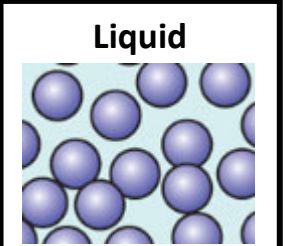
Speed of Sound

Gas



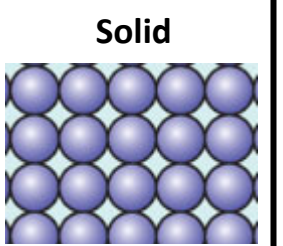
Particles far apart

Liquid



Particles closer...

Solid



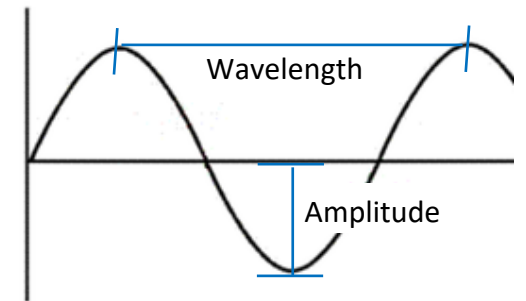
Particles very close

Slower → **Faster**
 Density Increases
 Particles collide more frequently
 Sound waves travel quicker

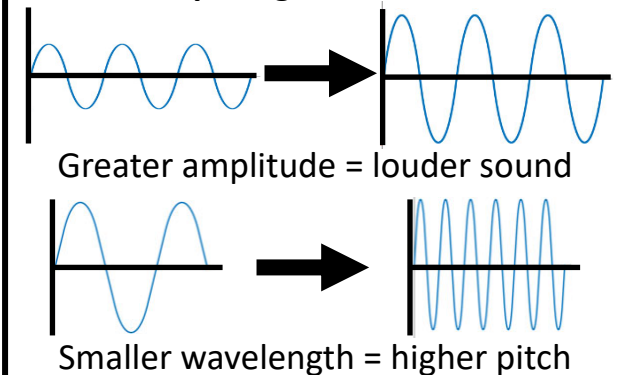
What is Sound?

Sound is a vibration, which travels as a longitudinal wave through substances.

Longitudinal (Sound) Waves



Comparing Sound Waves



Sound Facts

Vacuum

There are no particles to vibrate, so there are no sound waves. No sound can travel.

Speed of Sound in Air

Sound travels at 330 meters per second (m/s). This is a million times slower than the speed of light!

Frequency

The shorter the wavelength, the higher the frequency, the higher pitched the sound