**WAVE ANATOMY**



Mechanical Waves – vibrate matter

Transverse - matter moves \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to direction the wave travels

Longitudinal (Compressional) - matter vibrates in\_\_\_\_\_\_\_\_\_\_\_\_\_direction that wave travels

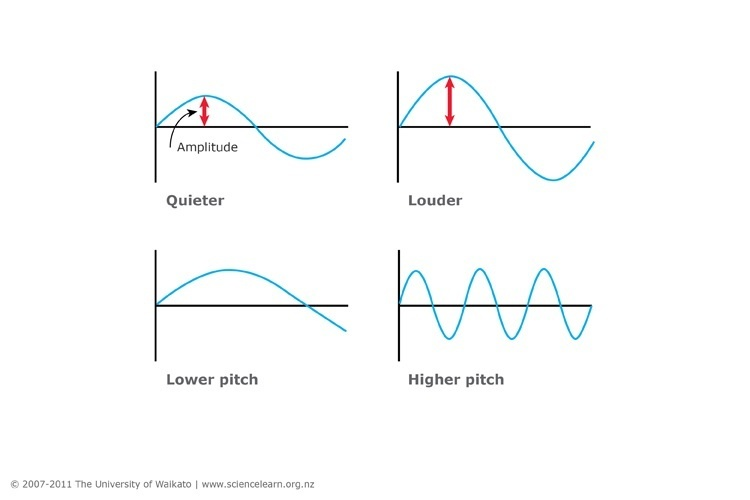
Surface – combination of transverse & longitudinal, producing circular motion  
Ex. Earthquake or Ocean waves

Velocity of Sound Waves

* Sound must be transmitted through matter
* Velocity depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* v at 0͒ Celsius is 332 m/s, 344 m/s at 20͒ degrees C
* Travels faster through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_air
* Faster through solids & liquids

**Loudness and Pitch**

* Intensity of sound depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Loudness describes a person’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to intensity
* Measured in **decibels** - dB
* Pitch - Way a person hears frequency (Hertz)

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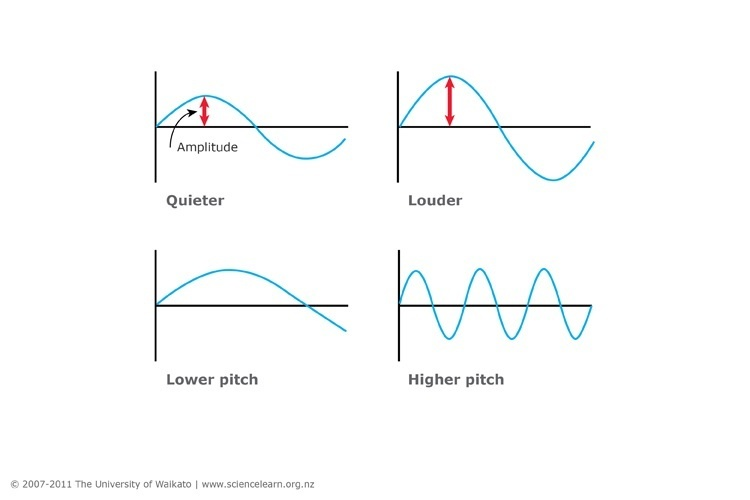
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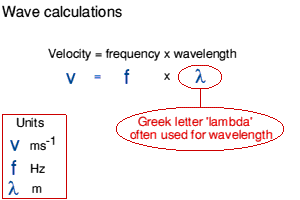
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Wave Calculations



Rearranged Equations

Practice:

1. A hummingbird beats its wings up and down with a frequency of 80.0 Hz. What is the period of the hummingbird's flaps?
2. Radio station KSON in San Diego broadcasts at both 1240 kHz (AM) and 97.3 MHz (FM).   
   a) How long is each? (kilo = 1000 & mega = 106)