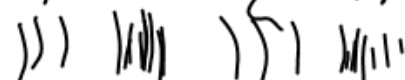


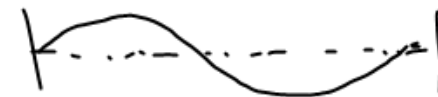
- Instrument types:
- Chordophone - Stringed
 - Membranophone - drums
with skin
 - Idiophone - strike it
resonates
 - Aerophone - brass, wind
 - Electrophone - e⁻

2 types of waves:

Sound - longitudinal - compressional

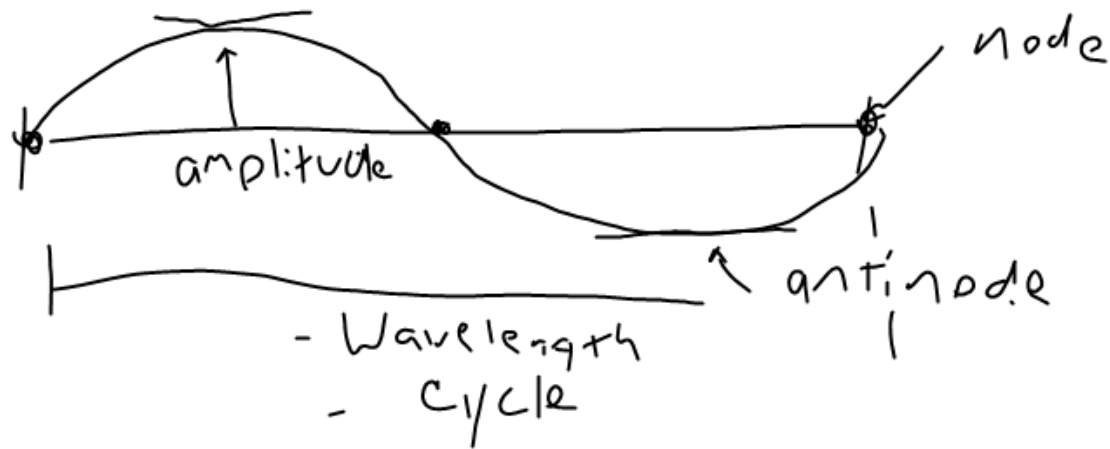
radiation - transverse - sinusoidal

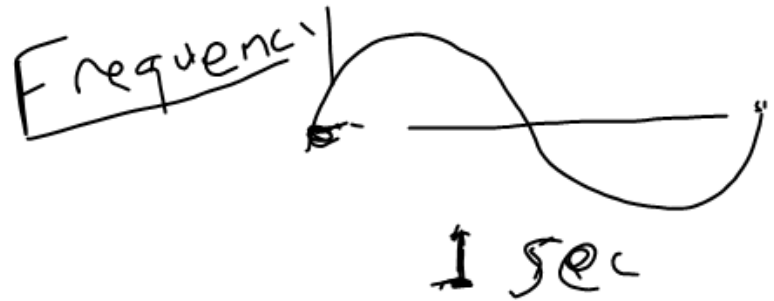
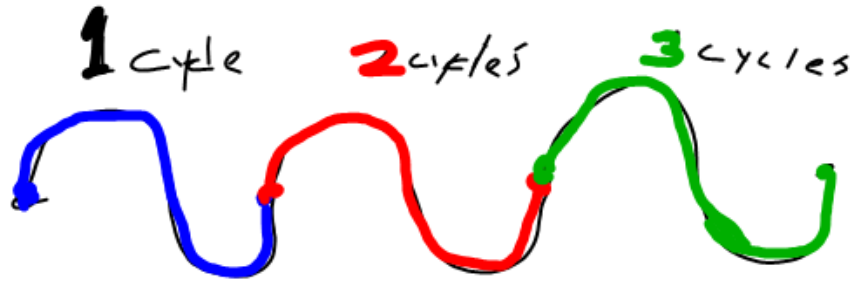
squeeze, expand

 A diagram showing a longitudinal wave with alternating regions of high particle density (compression) and low particle density (expansion). The compressions are represented by three vertical bars, and the expansions are represented by three gaps between vertical bars. A bracket above the diagram spans the width of one compression and one expansion, with the labels 'squeeze' and 'expand' above it.



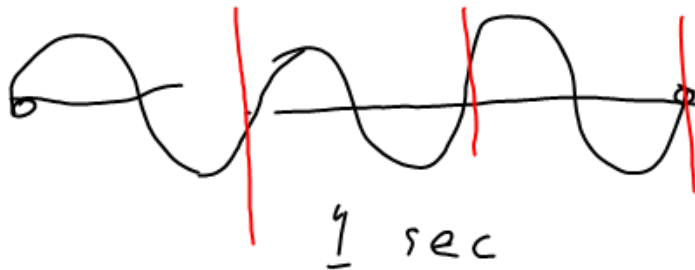
- Sound travels better in Solids & liquids than in gas because the molecules in the denser medium have a better chance of hitting the next one because they are closer!

Parts of a wave



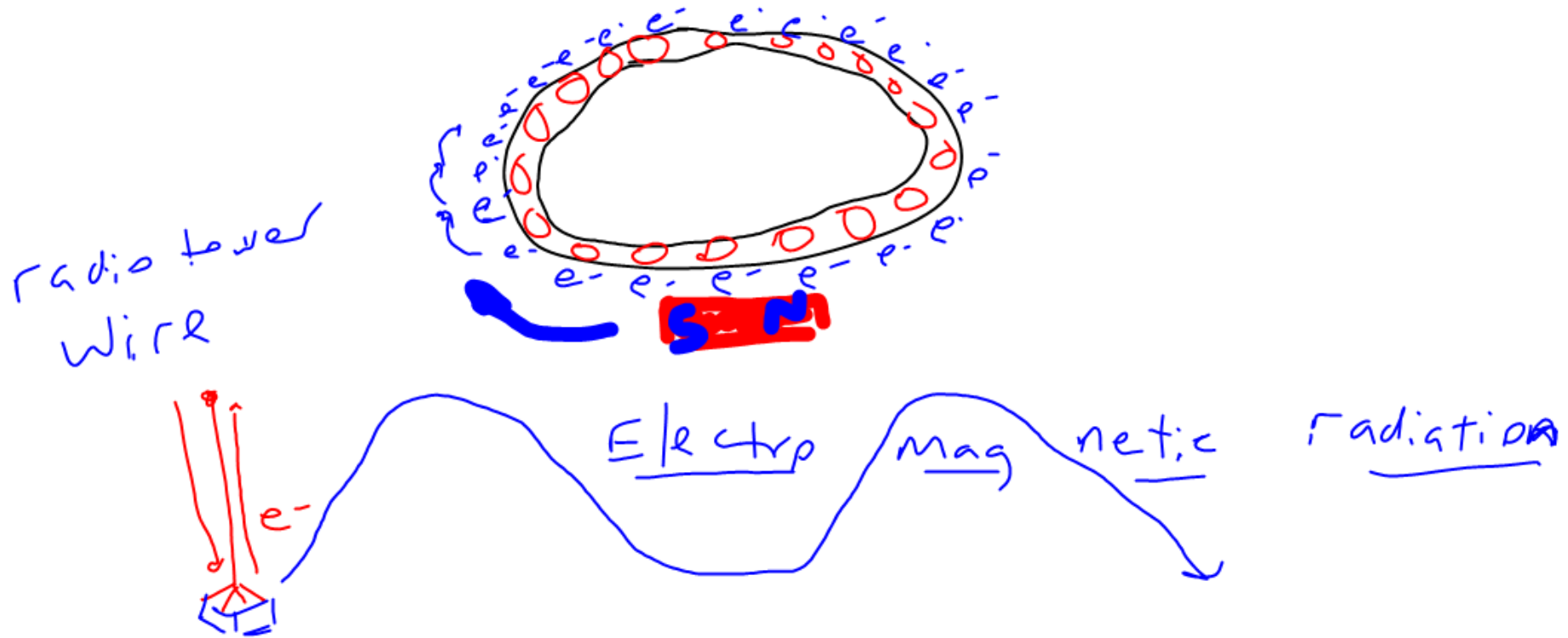


$$1 \text{ Hz} = 1 \text{ cycle/sec}$$



$$3 \text{ cycles in } 1 \text{ sec} \\ = 3 \text{ Hz}$$

Electromagnetism - called that because,
electricity causes magnetism!
magnetism causes electricity!



- EM waves do NOT require a medium!

- Speed of light = $300,000 \frac{\text{km}}{\text{s}}$

- polarization
only 1 plane



- photon - quantum particle of light.

Doppler Effect

