

Warm up 2/8:

1. Give 3 examples of waves:

- Sound waves → Longitudinal

- Earthquake wave

- Heat wave → Infrared waves

- Light

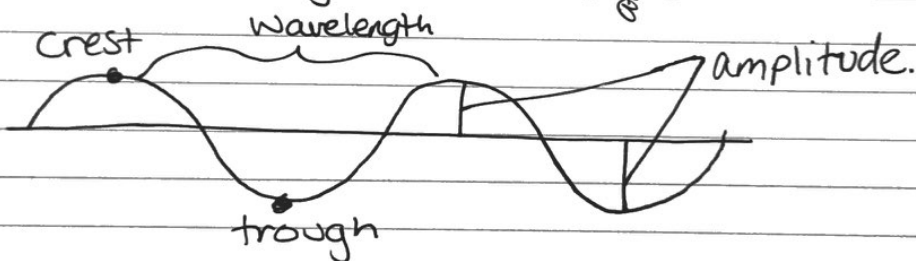
- Microwave

2. A wave is the movement of energy from one place to another.

3. Can a mechanical wave exist outside a medium?

No. Mechanical waves need mediums to travel through.

4. Draw a standing wave with <sup>at least</sup> 3 nodes.



Notes from class:

Frequency =  $\frac{\text{cycles}}{\text{second}}$  → unit is Hertz (Hz)

Period =  $\frac{\text{seconds}}{\text{cycle}}$  → unit is seconds (s)

$$f = \frac{1}{T}$$

$$T = \frac{1}{f}$$

← inverse!

The higher the frequency, the lower the period.

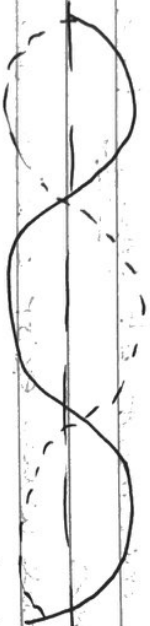
Resonance: The point at which the wave

As frequency goes  $\uparrow$ , wavelength goes  $\downarrow$

$$v = f\lambda$$

$$v = \text{Velocity (m/s)} \quad f = \text{frequency (Hz)}$$

$$\lambda = \text{wavelength (m)}$$



$$v \rightarrow \frac{\Delta x}{t} \quad \text{cycles (distance per cycle) / second (time)}$$