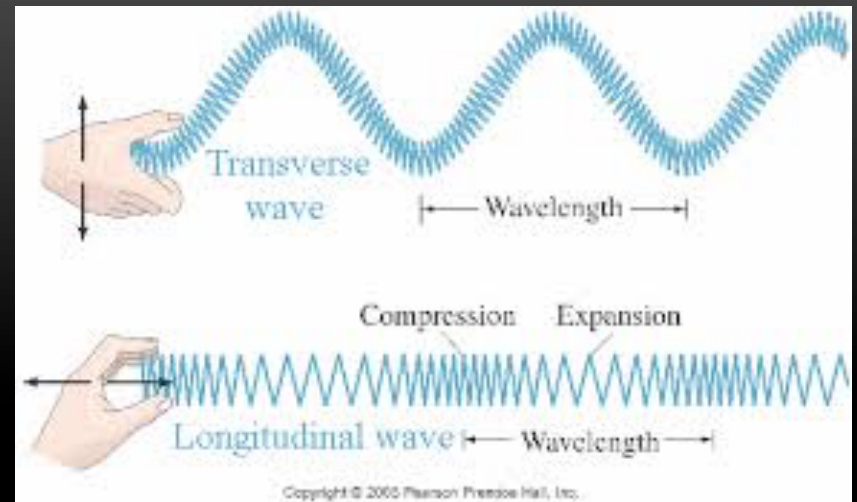


# WAVES

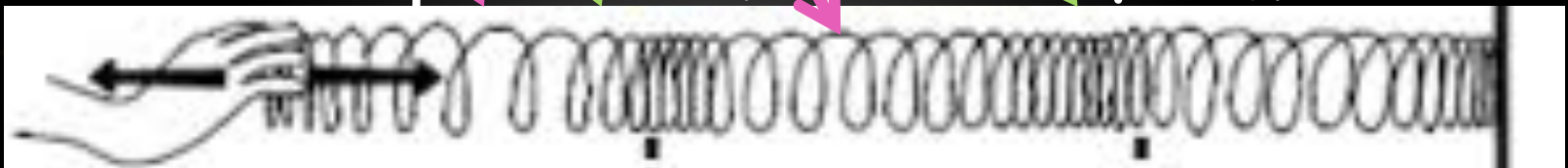


*Write what is in **WHITE**. You will do this as an outline format*

- 1. Wave
  - a disturbance that transfers energy from one place to another.
    - 1a: energy- ability to do work
- 2. Medium
  - any substance that a wave moves through
  - Examples: can be a solid liquid or gas
  - Can you hear sound in space?
  - Sound in space

- 3. Mechanical Waves-
    - waves that require a medium
      - Ex: Sound
  - 4. Electromagnetic Waves-
    - waves that do not require a medium
    - Ex: visible light, radio waves
-

- 5. Longitudinal Wave
  - wave particles vibrate back and forth along the path that the wave travels.
  - Also known as a : Compressional Wave
  - 5a. Compressions
    - The close-together part of the wave
  - 5b. Rarefactions
    - The spread-out parts of a wave

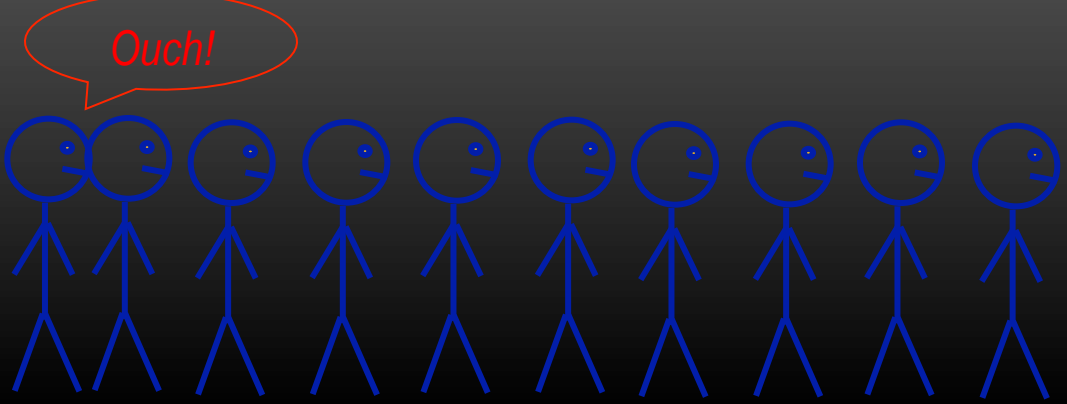


# LONGITINAL WAVES (CONT.)

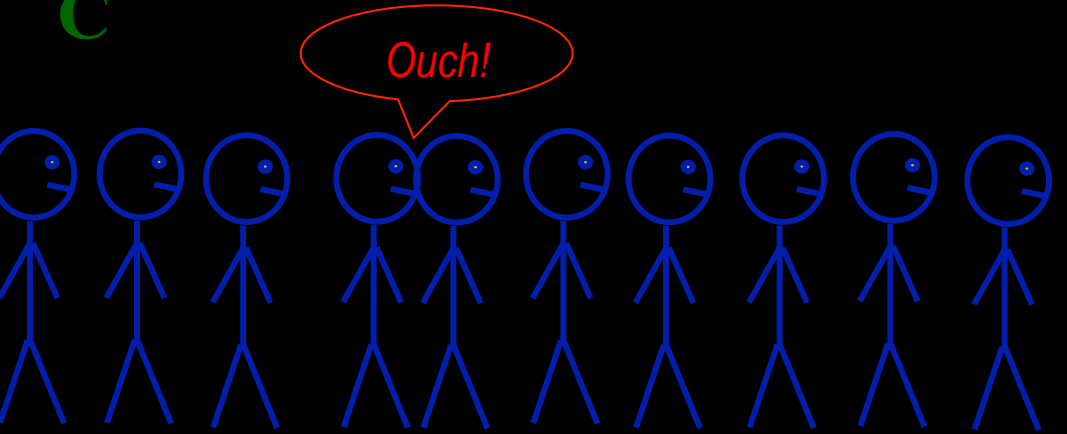
**C** = Compression (high kid density)

**R** = Rarefaction (low kid density)

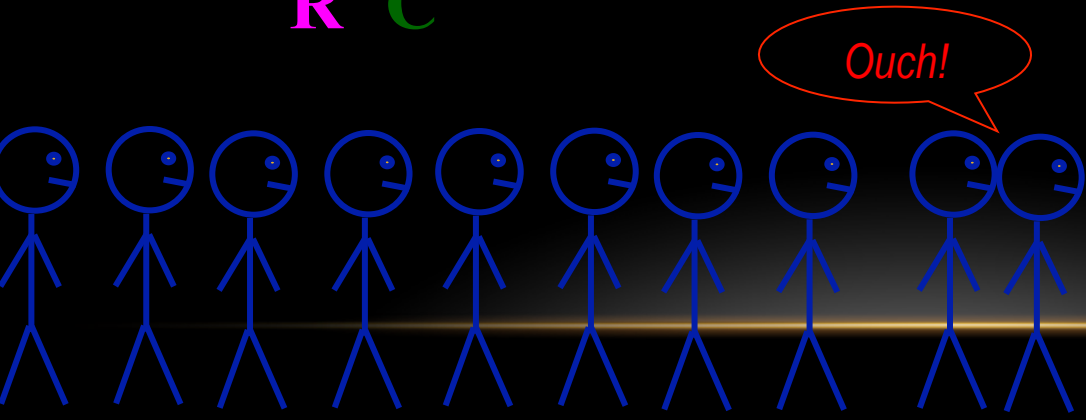
The compression (the pulse) moves up the line, but each kid keeps his place in line.



**C**



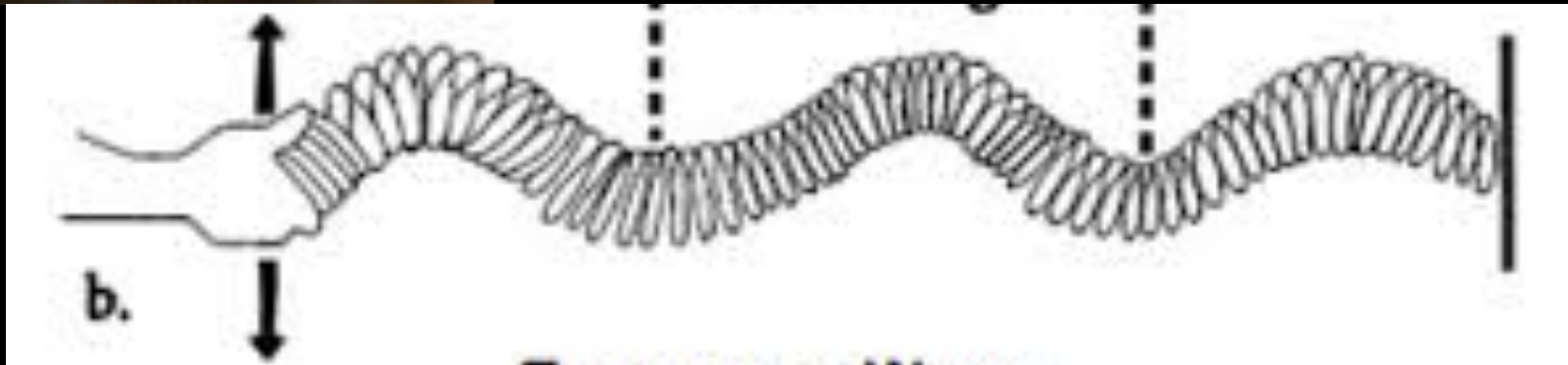
**R C**



**R C**

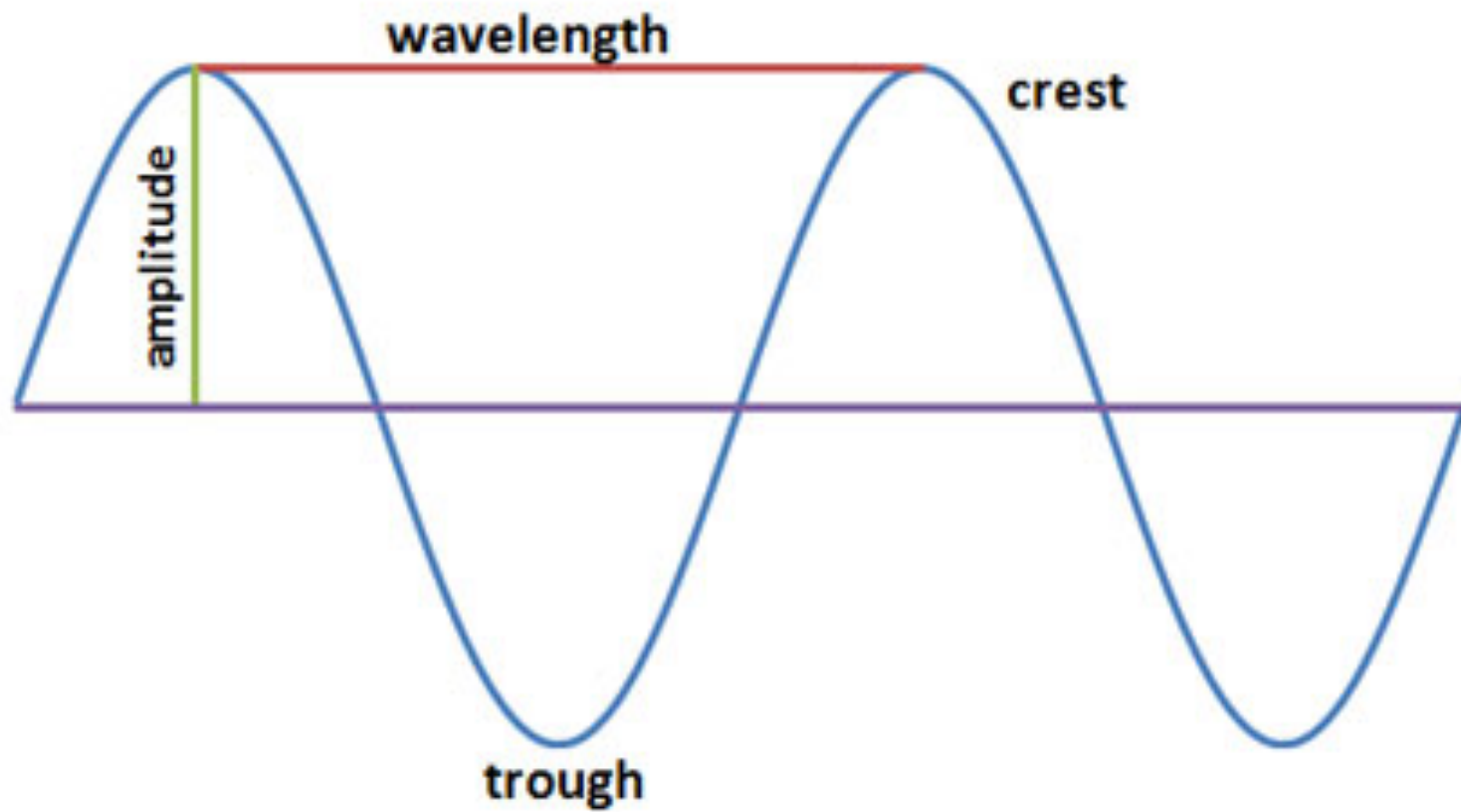


- 6. Transverse waves
  - wave particles vibrate in an up-and-down or side-to-side motion



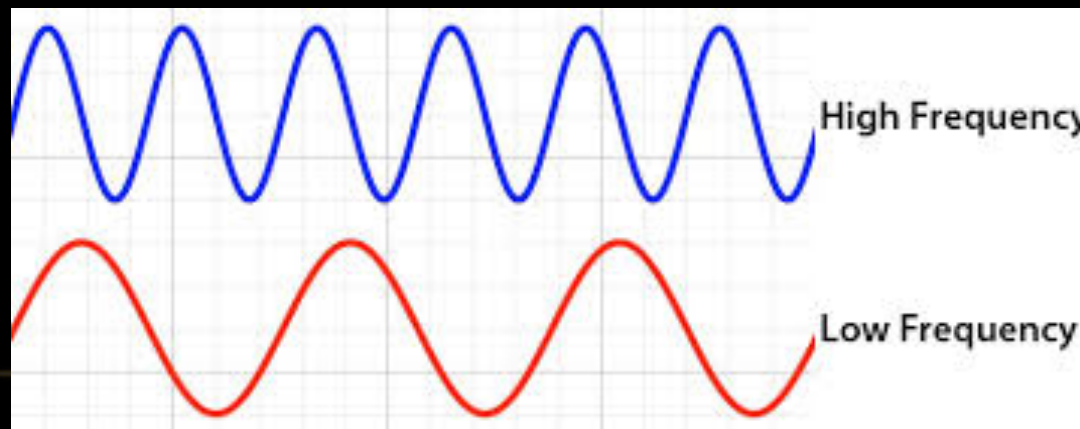
## 6. CONTINUED

- Wavelength- the distance between two successive points in the wave.
- Crests- Highest part of a wave
- Troughs- The low points of the wave
- Amplitude- is the maximum distance in a wave from its rest position.

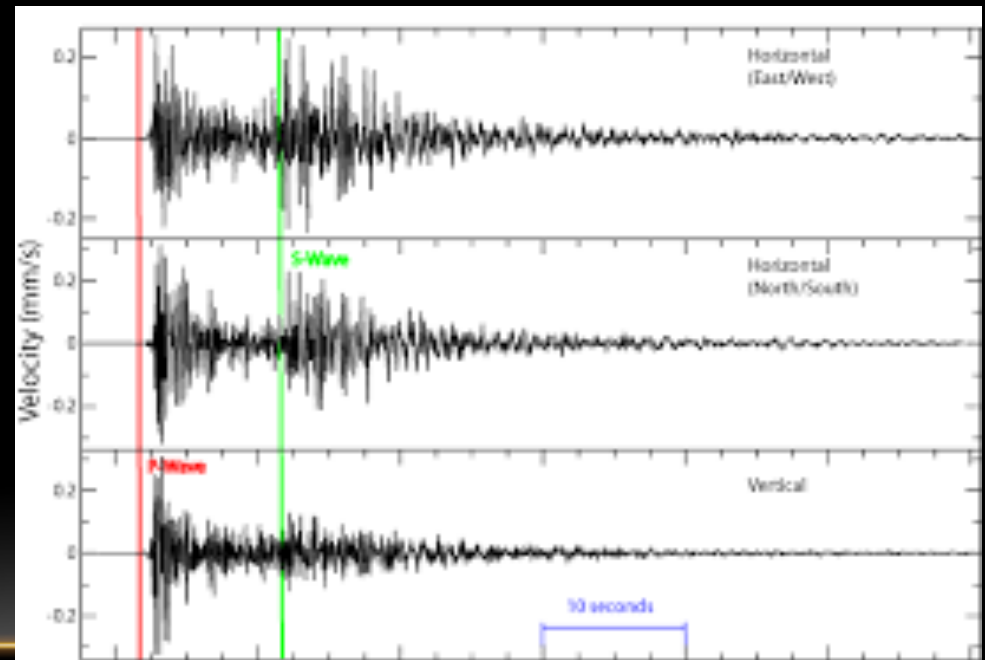
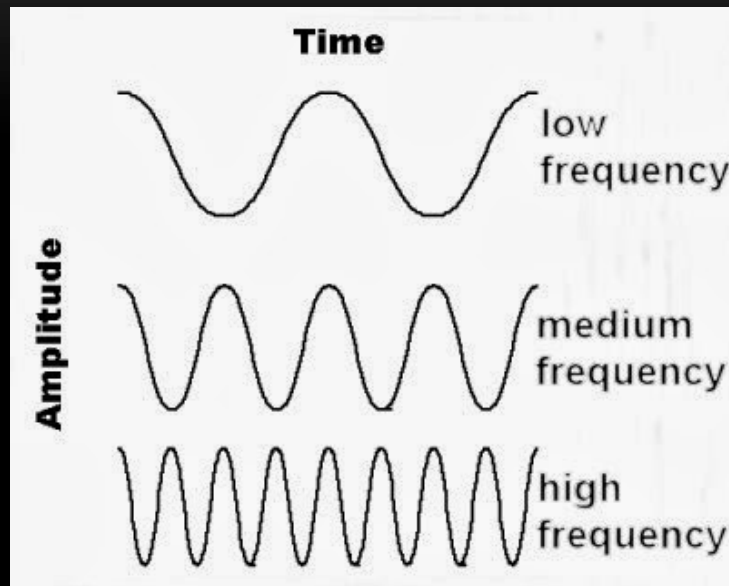




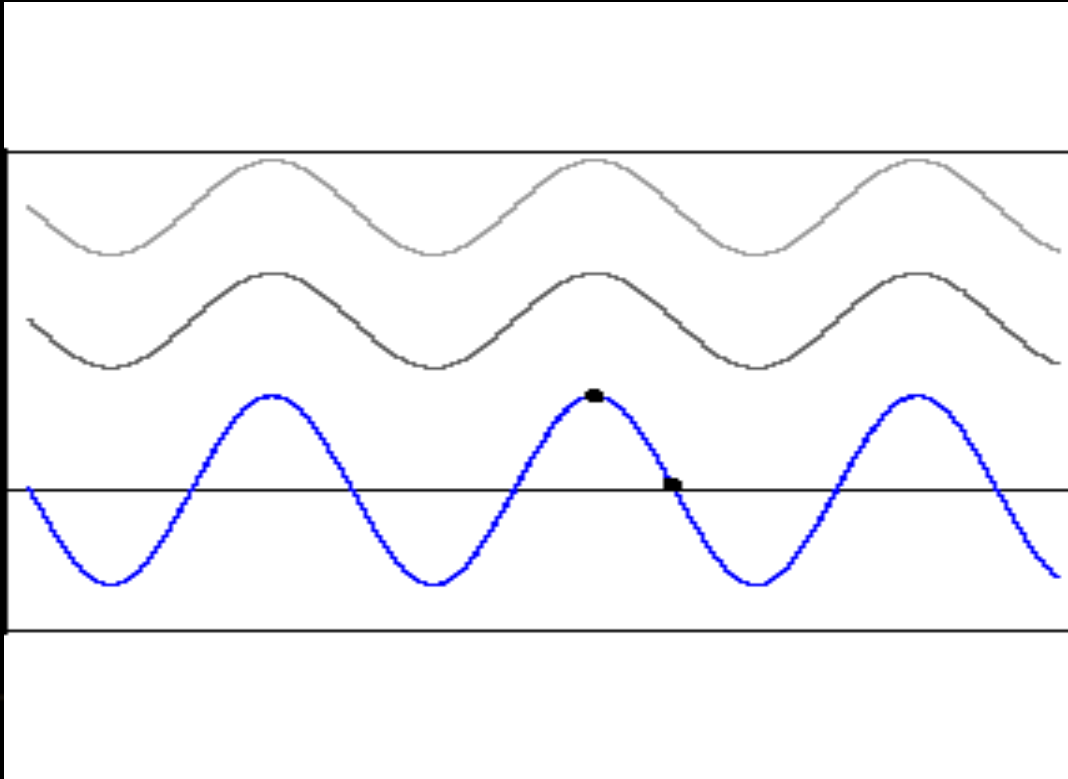
- Frequency- the number of waves produced in a given time
  - Unit= Hertz, Hz



- Wave Speed - Frequency  $\times$  Wavelength



- Interference- the result of two or more sound waves overlapping



# INTERFERENCE

**Destructive**



+



=



**Constructive**



+



=

