

Study Guide:

- Waves:
  - Transverse – light
  - Longitudinal- sound
  - Mechanical
- Characteristics:
  - Crest
  - Trough
  - Amplitude
  - Wavelength
  - Velocity/Speed
  - Frequency
  - Pitch
  - Period
- Doppler Effect
  - Concept
  - Formula use
- Resonance
- Wave interference
  - Constructive
  - Destructive
- Standing Waves
  - Harmonics
  - Nodes
  - Antinodes
  - Finding wavelength
  - Finding velocity
- Hooke's Law
  - Concept
  - Formula use
- Pendulums
  - Concepts
  - Formula use
- Open and Closed Pipes

Formulas:

$$V = f \lambda$$

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

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

$$f = \frac{V_{\text{sound}} \pm V_{\text{source}}}{V_{\text{sound}}} f_0$$

$$L = \frac{n}{2} \lambda$$

$$F = -kx$$

$$T = 2\pi \sqrt{\frac{L}{g}}$$