

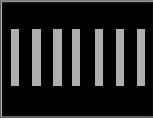
Wave Properties

Wave Motion

- **Wave**
 - the motion of a disturbance
- **Medium**
 - the material that a wave travels through
- **Mechanical Wave**
 - a wave that needs a medium to move through

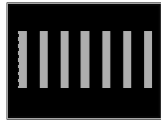
Types of Waves

- **Transverse Wave**
 - causes the particles of the medium to vibrate perpendicularly to the direction of motion of the wave.



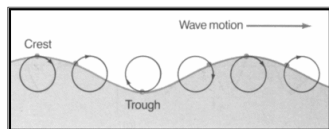
Types of Waves (cont.)

- **Longitudinal**
 - causes the particles in the medium to move parallel to the direction of the wave



Types of Waves (cont.)

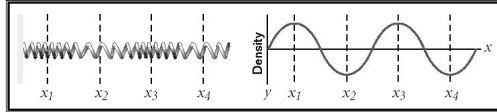
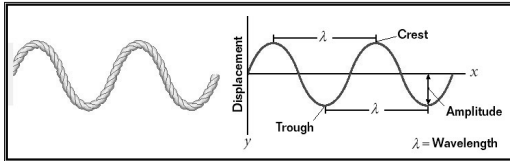
- **Surface**
 - Combination of transverse and longitudinal



Types of Waves (cont.)

- **Pulse Wave**
 - single non-periodic disturbance
- **Periodic Wave**
 - A wave whose source is some form of periodic motion.

Parts of a Wave



Measuring a Wave

- **period (T)**
 - the amount of time it takes a wave to pass
- **frequency (f)**
 - the number of times a wave passes per second

$$f = \frac{1}{T} \quad \text{or} \quad T = \frac{1}{f}$$

Measuring a Wave (cont.)

- **Wavelength (λ)**
 - the distance between similar points on adjacent waves
- **Velocity (v)**
 - $v = \lambda f$
- **Amplitude**
 - amount of energy in a wave
 - Energy = amplitude²

Return to Honors Physics
Notes
