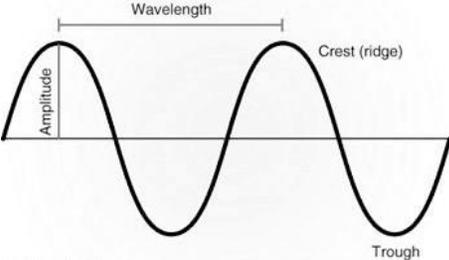


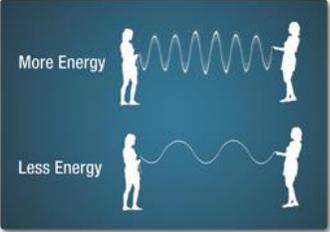
Write the definition in your own words and draw an example to help you understand. You may complete this sheet OR make notecards.

<u>Word</u>	<u>In your own words</u>	<u>Picture with verbal Explanation</u>
<p>Simple harmonic motion (SHM): Repetitive movement back and forth through an equilibrium, or central, position, so that the maximum displacement on one side of this position is equal to the maximum displacement on the other side. The time interval of each complete vibration is the same, and the force responsible for the motion is directed toward the equilibrium position and is directly proportional to the distance from it.</p>		
<p>Pendulum: a mass on a string that is free to swing back & forth under the influence of gravity</p>		
<p>Wave: disturbance from place to place in a regular and organized way. A vibration in matter, whether solid, gas, liquid, or plasma..</p>		
<p>Mechanical wave: a mechanical disturbance from a state of equilibrium that propagates through an elastic material medium. Example: sound</p>		

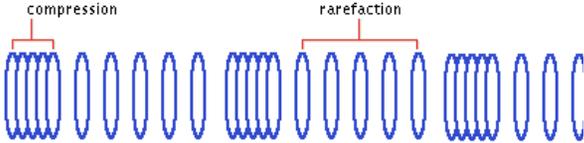
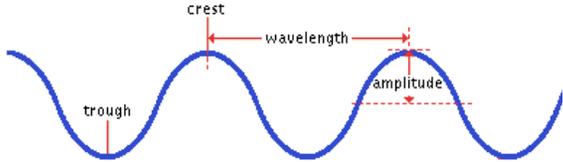
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<p>Electromagnetic wave or Electromagnetic radiation: differ from mechanical waves in that they do not require a medium to propagate. This means that electromagnetic waves can travel not only through air and solid materials, but also through the vacuum of space. Example: light waves</p>		
<p>Period: the time it takes for one complete cycle (example: time for a pendulum to swing back and forth one time or the time for one wave-crest and trough- to pass). $T = 1/f$</p>		
<p>Frequency: the number of complete cycles (ex: back and forth swings on a pendulum or complete waves) per second. The number of crests that pass a given point within one second. One wave—or cycle—per second is called a Hertz (Hz) This may be determined by completing the following: time in seconds divided by # of swings in that time period, for example: (30 sec. / # of swings) $f = 1/T$</p>		
<p>Wavelength: the distance between successive crests of a wave, especially points in a sound wave or electromagnetic wave</p>		

Write the definition in your own words and draw an example to help you understand. You may complete this sheet OR make notecards.

<p>Bob: mass at the end of the string.</p>		
<p>Energy of a wave: lower frequency waves have less energy</p> 		
<p>Pendulum length: length in meters from the pivot point to the center of gravity for the mass.</p>		
<p>Amplitude: release height or angle for a pendulum; distance from equilibrium point on a wave to crest OR trough</p>		
<p>Medium: Matter that waves are traveling through. A vacuum (empty space) is a lack of medium</p>		

Write the definition in your own words and draw an example to help you understand. You may complete this sheet OR make notecards.

<p>Compression: a point on a medium through which a longitudinal wave is traveling that has the maximum density</p>		
<p>Rarefaction: a point on a medium through which a longitudinal wave is traveling that has the minimum density</p>		
<p>Longitudinal wave: displacement of the medium is parallel to the propagation of the wave. A wave in a "slinky" is a good visualization. Example: Sound waves in air</p>		 <p style="text-align: center;">Figure 1: Longitudinal wave</p>
<p>Transverse wave: displacement of the medium is perpendicular to the direction of propagation of the wave. A ripple on a pond and a wave on a string are easily visualized transverse waves. Example: Light waves</p>		 <p style="text-align: center;">Figure 2: Transverse Wave</p> <p>Microsoft Illustration</p>
<p>Resonance: the reinforcement of sound by reflection from a surface or by the synchronous vibration of a neighboring object</p>		

Write the definition in your own words and draw an example to help you understand. You may complete this sheet OR make notecards.

Doppler Effect: the change in frequency of a wave (or other periodic event) for an observer moving relative to its source

