**Waves**

Wave = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1) Mechanical Waves – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (or medium) to transfer energy

* + - A medium is the substance through which a wave can travel. Ex. Air; water; particles; strings; solids; liquids; gases

2) Electromagnetic Waves – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (or medium) to transfer energy

* + - They do not need a medium, but they can go through matter (medium), such as air, water, and glass

**Mechanical Waves can be transverse and/or compression (longitudinal)**
1) Transverse = Energy causes the matter in the medium to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at right angles to the direction the wave travels

crest = \_\_\_\_\_\_\_ point
trough = \_\_\_\_\_\_\_ point
wavelength = distance between crests
amplitude = the peak (greatest) value (either positive or negative) of a wave. The larger the
 amplitude, the greater the energy
frequency = number of wavelengths that pass a point in 1 sec

2) Compression (longitudinal) = matter in the medium moves forward and backward along the same direction that the wave travels.

compression = part of wave where
 particles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
rarefaction = part of wave where
 particles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_