EM Waves, Light and Sound Test Study Guide

Vocabulary to Know:

* absorption
* amplitude
* compression
* crest
* decibels (dB)
* electromagnetic spectrum
* electromagnetic wave
* frequency
* hertz (Hz)
* longitudinal wave
* mechanical wave
* opaque
* rarefaction
* reflection
* scattering
* translucent
* transparent
* transverse wave
* trough
* vibration
* wavelength

Concepts to Know:

* What do all waves transfer?
* What are the parts of a wave: crest, trough, wavelength, amplitude?
* How is wavelength measured in a longitudinal wave?
* How are the waves on the electromagnetic spectrum arranged?
* Which electromagnetic wave has the lowest frequency and longest wavelength? Highest frequency and shortest wavelength?
* How are electromagnetic waves different from each other?
* When visible light is absorbed by matter what happens to it?
* How does color affect the absorption of visible light?
* What part of the electromagnetic spectrum can be broken into seven colors?
* Which color of visible light has the shortest wavelength? Longest wavelength?
* When all seven colors of visible light are present, what color is the visible light?
* How do we see specific colors of visible light?
* Why does the sky appear blue?
* What is the relationship between frequency and wavelength?
* How does a sound wave get started?
* What type of wave is a sound wave?
* Through what state of matter do sound waves travel the fastest? Slowest?
* What factors affect how fast sound waves travel?
* How is the volume (loudness) of a sound changed?
* How is an echo produced?
* How does 265 Hz compare to 512 Hz?
* How many decibels is the volume of normal conversation?
* At what decibel level can hearing be damaged?
* How are frequency and pitch related?
* Why is there no sound in space?