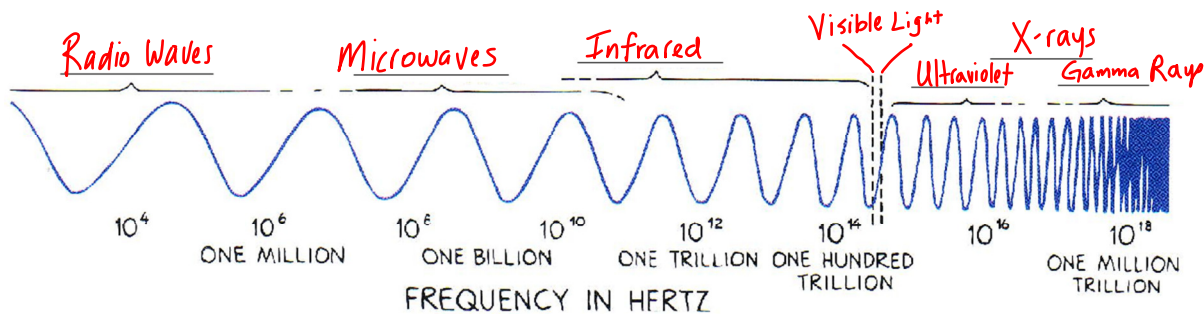
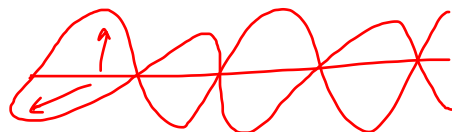


- What is one thing that supports the particle theory of light?  
The particle theory is supported by the fact that light travels in straight lines. It was also theorized that light acts like a particle called photons which are massless bundles of concentrated electromagnetic energy. (P. 404-405)
- Define diffraction: Diffraction is the bending of a wave around a barrier, such as an obstacle or barrier. (P. 483.)
- Summarize Einstein’s photoelectric effect below:  
Einstein's photoelectric effect stated that light consisted of particles-massless bundles of energy-called photons. (P. 405)
- Scientists now agree that light has a dual nature part Particle and part Wave. (P. 405.)
- Who is responsible for the most famous light speed experiment and what did he calculate it to be?  
Albert Michelson and 299,920 m/s m/s. Pg. 407
- The speed of light in a vacuum is a Universal c constant. (P. 407)
- How long does it take light from the sun to reach the Earth?  
About 8 minutes. (P. 407)
- How long does it take from the next nearest star? 4 years, which means it is 4 light years away. (Pg. 407)
- Light is partially electric and partially magnetic so it is an Electromagnetic wave. (Pg. 408)
- Label the electromagnetic spectrum.  
(Label the following: Radio waves, microwaves, infrared, visible light, ultraviolet, x-rays, gamma rays)



- How a receiving material responds to light depends on what 2 things?  
The frequency of the light & The natural frequency of the electrons in the material. (P. 409)
- A material (such as glass or water) that lets light pass through is Transparent, while materials that let no light through (wood) are called Opaque. (P. 409-411)
- What type of waves are light waves? t Transverse wave. (p. 414)
- Sketch light waves that would be polarized:



Look @ examples page 415