**Unit 2 Notes**

**Electromagnetic Radiation**

Electromagnetic Radiation - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ being transmitted from one place to another by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ differentiate the different forms of EMR

Wavelength – The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between two consecutive wave \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Frequency – How many wave peaks pass a certain point per given period of time

Speed- All light travels with the speed of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Scientists have found that light behaves as both a \_\_\_\_\_\_\_\_\_\_\_\_\_ and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Photons – a stream of tiny packets of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Emission of Energy by atoms-

What was happening during our flame test lab causing us to see different colors?

Why do we see certain colors in spectroscopes for different gaseous elements?

Wavelength and frequency calculations:

Formula:

c= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of light (always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

λ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, units:

v=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, units:

Examples:

What is the wavelength of a wave with a frequency of 4.38 x 1014 Hz

What is the frequency of a wave with a wavelength of 3.98 x 10-6 m

What is the wavelength of a wave with a frequency of 9.87 x 1013 Hz

What is the frequency of a wave with a wavelength of 5.22 x 10-7 m