Dougherty Valley HS AP Chemistry
Atomic Structure
Quick Check #1

S-37

Name: **Date:** **Period:** **Seat #:**

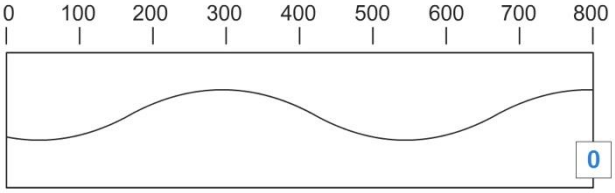
Formulas and Constants				
$c = \lambda\upsilon$	$\upsilon = \frac{c}{\lambda}$	$\lambda = \frac{c}{\upsilon}$	$E = h\upsilon$	$E = \frac{hc}{\lambda}$
$c = 2.998 \times 10^{8}$ m/s		$h = 6.626 \times 10^{-34}$ J·s		

☐ List all electromagnetic radiations from low energy to high.

			R O Y G B V			

☐ We can see electromagnetic radiation with wavelengths between 400 nm and 700 nm.
Is 400 nm red light or violet light? _____ Justify your answer.

☐ Consider this graphic from the **Online Tutorial: Electromagnetic Radiation**. The scale is in nm.



What is the wavelength (λ) of this wave? _____nm
Would you be able to see this wave? _____
What is this wavelength in meters? _____m

☐ Yellow light from a sodium vapor light has a wavelength of 589 nm. Calculate the frequency of this color of yellow light in Hz.

☐ A radio station (KPCC) has a frequency of 89.3 MHz (megahertz).
How many Hz are in a MHz? _____
What is the frequency of this radio wave in s^{-1}? _____
What is the energy of the radio waves being emitted (in Joules)?