

Assignment: 1

Name: PILARZ

Hour: KEY

Light and the Electromagnetic Spectrum

Light is comprised of photon.

Photons = (named by Albert Einstein) are particles of light

Light travels extremely fast

- Approximately 300,000 km/s through a vacuum (remember that different mediums can cause light to change speed as it passes through them)
- Light travels much faster than sound
 - o Example: You see lightning before you hear the thunder

Visible Light is part of the electromagnetic spectrum... therefore it is an electromagnetic wave

- Remember electromagnetic waves do NOT need a medium to travel through
- Electromagnetic waves travel using both the electric field and the magnetic field

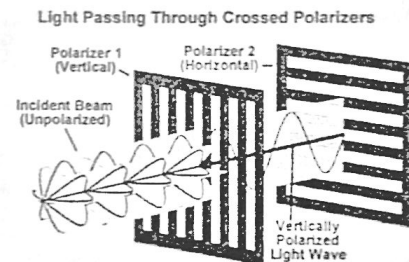
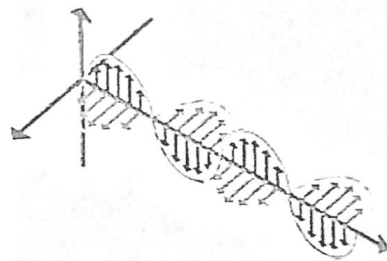
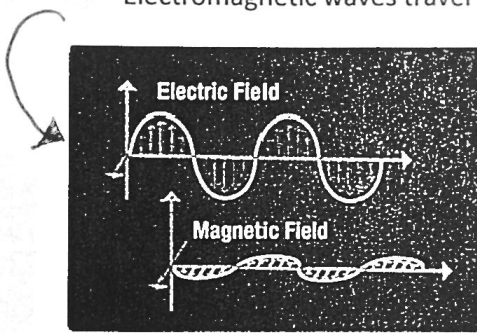


Figure 1

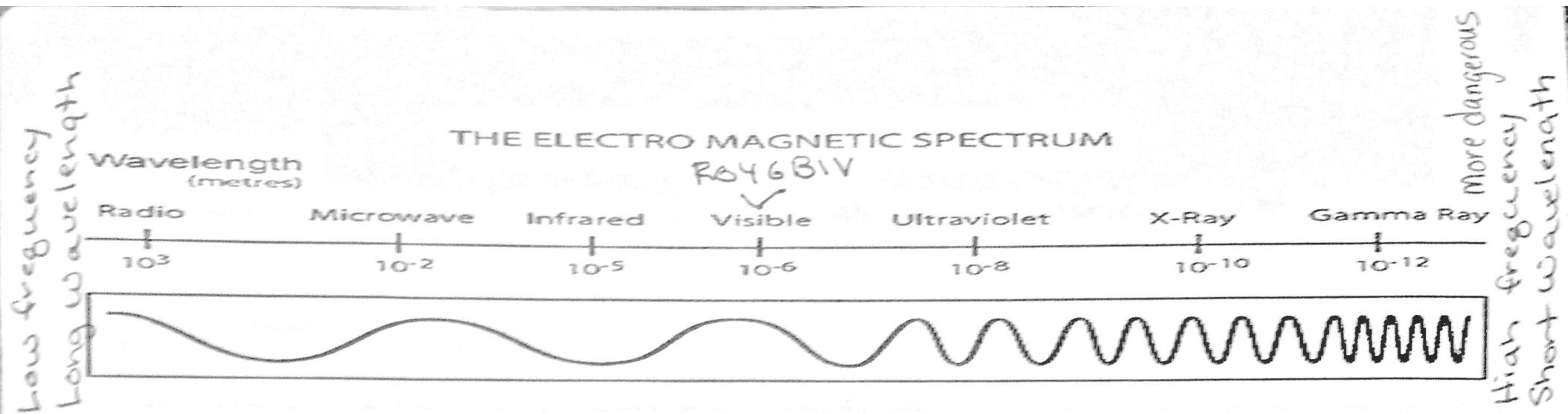
Polarized Light = Light that passes through a polarized filter that blocks light waves vibrating in certain directions

Color

- There are three primary colors of light:
 - o Red, Green, Blue
 - o Note: These are NOT the same as the primary colors of paint
- The color something appears is due to the wavelengths it reflects NOT what it absorbs
 - o Ex: Leaves are green because the chlorophyll molecules reflect wavelengths of green light and absorb red and blue
- Colorblindness – the cones in your eyes (we will get into details of the eye later this week) are sensitive to different colors
 - o Most common form of colorblindness is red/green
 - Affects about 1 of every 12 males
 - Affects men more often than women as it is an X chromosome sex linked trait

Men
XY

Women
XX



After you have taken the quiz and used Google on some of your answers, jot down notes about the different parts of the electromagnetic spectrum that you missed during the presentations. (Hint: If it was on the quiz... it will most likely be on the mini test for this unit!)

Topic:	Additional Notes:
Radio	
Microwaves	
Infrared	