

## Electromagnetic Spectrum Worksheet #1

- In each of the following pairs, circle the form of radiation with the LONGER WAVELENGTH:
  - red light **or** blue light
  - microwaves **or** radiowaves
  - infrared radiation **or** red light
  - gamma rays **or** UV radiation
- In each of the following pairs, circle the form of radiation with the GREATER FREQUENCY:
  - yellow light **or** green light
  - x-rays **or** gamma rays
  - UV radiation **or** violet light
  - AM radio waves **or** FM radio waves
- In each of the following pairs, circle the form of radiation with the LOWER ENERGY:
  - red light **or** blue light
  - microwaves **or** radiowaves
  - infrared radiation **or** red light
  - gamma rays **or** UV radiation
  - yellow light **or** green light
  - x-rays **or** gamma rays
  - UV radiation **or** violet light
  - AM radio waves **or** FM radio waves
- Springfield's "Classic Rock" radio station broadcasts at a frequency of 102.1 MHz. What is the length of the radio wave **in meters**?
- A beam of light has a wavelength of 506 nanometers. What is the frequency of the light? What color is the light?
- Blue light has a frequency of  $6.98 \times 10^{14}$  Hertz. Calculate the wavelength of blue light **in nanometers**.