

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### Electromagnetic Spectrum Worksheet #1

- In each of the following pairs, circle the form of radiation with the LONGER WAVELENGTH:
    - red light ~~or~~ blue light
    - infrared radiation ~~or~~ red light
    - yellow light ~~or~~ green light
    - UV radiation ~~or~~ violet light
    - microwaves ~~or~~ radiowaves
    - gamma rays ~~or~~ UV radiation
    - x-rays ~~or~~ gamma rays
    - AM radio waves ~~or~~ FM radio waves
  - In each of the following pairs, circle the form of radiation with the GREATER FREQUENCY:
    - red light ~~or~~ blue light
    - infrared radiation ~~or~~ red light
    - yellow light ~~or~~ green light
    - UV radiation ~~or~~ violet light
    - microwaves ~~or~~ radiowaves
    - gamma rays ~~or~~ UV radiation
    - x-rays ~~or~~ gamma rays
    - AM radio waves ~~or~~ FM radio waves
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    - UV radiation ~~or~~ violet light
    - microwaves ~~or~~ radiowaves
    - gamma rays ~~or~~ UV radiation
    - x-rays ~~or~~ gamma rays
    - AM radio waves ~~or~~ FM radio waves
- Springfield's "Classic Rock" radio station broadcasts at a frequency of 102.1 Hz. What is the length of the radio wave in meters?
  - A beam of light has a wavelength of 508 nanometers. What is the frequency of the light? What color is the light?
  - Blue light has a frequency of  $6.95 \times 10^{14}$  Hertz. Calculate the wavelength of blue light in nanometers.

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