

The Electromagnetic Spectrum

Purpose:

The purpose of this activity is to have you become familiar with the different forms of electromagnetic radiation within the electromagnetic spectrum, and to identify the relationship between wavelength and energy within the electromagnetic spectrum.

Materials: graph paper (provided), data on wavelength and wave height, and colored pencils

Procedure:

- a) Using the data provided in Table 3-1, create a multiple line chart that displays the relative wavelength of seven portions of the EMR. The first one is done for you, Radio Waves. (Plot Microwaves second, then Infrared, etc)
- b) Blank data means there is no data point to plot.
- c) Color each wavelength with a different colored pencil and label on the right hand side.

Conclusion:

1. What portion of the electromagnetic spectrum has the shortest wavelength?
2. Which portion of the electromagnetic spectrum has the longest wavelength?
3. Describe the relationship between wavelength and energy within the electromagnetic spectrum.
4. List the seven colors of the visible light portion of the electromagnetic spectrum from shortest wavelength to longest wavelength.