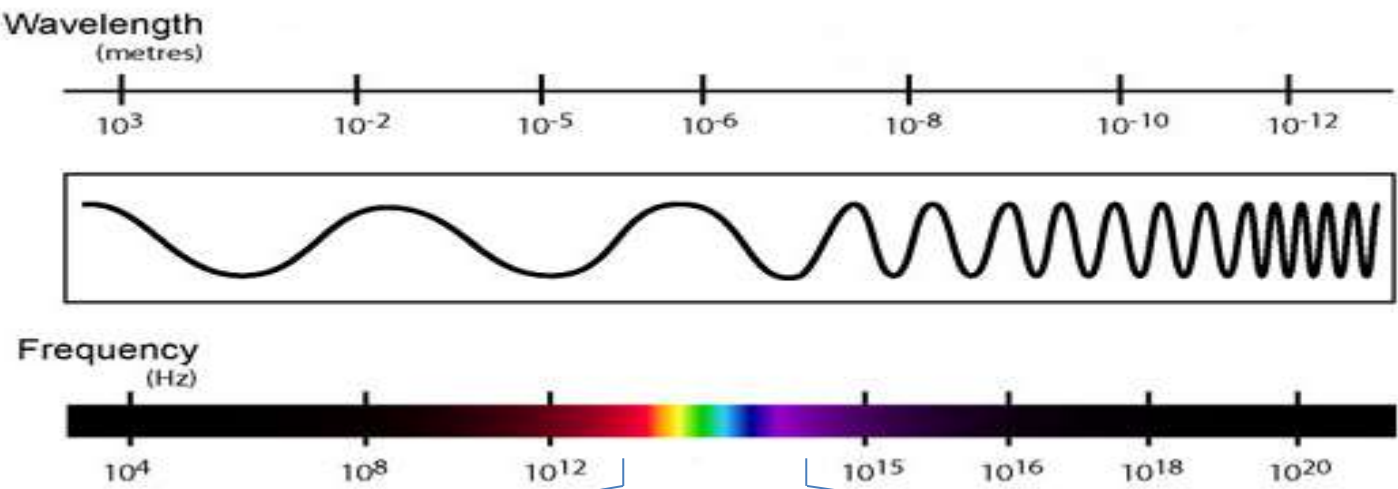


Materials: Colored Pencils and Textbook

- # 1: Use the diagram in your textbook (Chapter 25) to label the diagram with the appropriate EM waves.
- # 2: Use colored pencils to color the Visible Light Spectrum with (ROYGBIV).
- # 3: Label the Low and High Energy, the Low and High Frequency and the Long and Short Wavelengths.
- # 4: Identify the relationships between the frequency, energy and wavelength.
- # 5: Research to find some examples/uses of each type of electromagnetic wave. List these on the back of this sheet.

The ELECTROMAGNETIC SPECTRUM

1) _____



2) _____

3) _____

Energy

Frequency

Wavelength

- | | | | | |
|---|-----------|-----------|----------------|--------------|
| 4) As the frequency of a wave increases, the energy: | Increases | Decreases | Stays the same | (circle one) |
| The relationship between frequency and energy is: | Direct | Indirect | | (circle one) |
| As the λ of a wave increases, the energy: | Increases | Decreases | Stays the same | (circle one) |
| The relationship between λ and energy is: | Direct | Indirect | | (circle one) |
| As the frequency of a wave increases, the λ : | Increases | Decreases | Stays the same | (circle one) |
| The relationship between frequency and λ is: | Direct | Indirect | | (circle one) |

Examples:

Type of Electromagnetic Wave	Example/Uses of this type of wave.