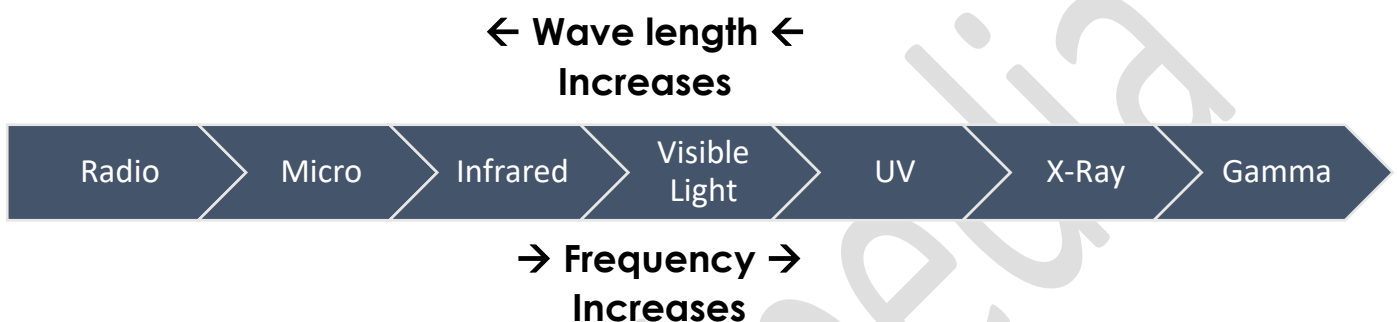


# Electromagnetic Waves

- EM waves are created as a result of vibrations between an electric field and a magnetic field.

- Electromagnetic Spectrum



- Properties of EM waves

- They are a type of Transverse waves
- A medium is not necessary to travel.
- Don't care about Electric fields and Magnetic fields.
- Travel in a straight line till it meets another medium.
- Matter absorbs an amount of energy when EM waves pass through it.
- Every EM Wave has a same speed in a vacuum.
- They have a lower speed in other mediums. You can get it from below formula.

$$V = \frac{1}{\sqrt{(\epsilon\mu)}}$$

$\epsilon$  = Permittivity

$\mu$  = Permeability