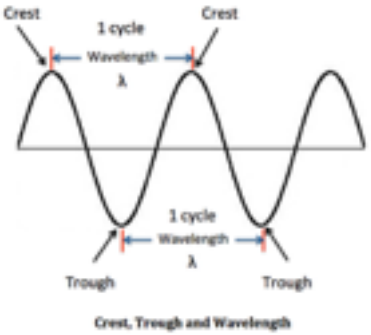
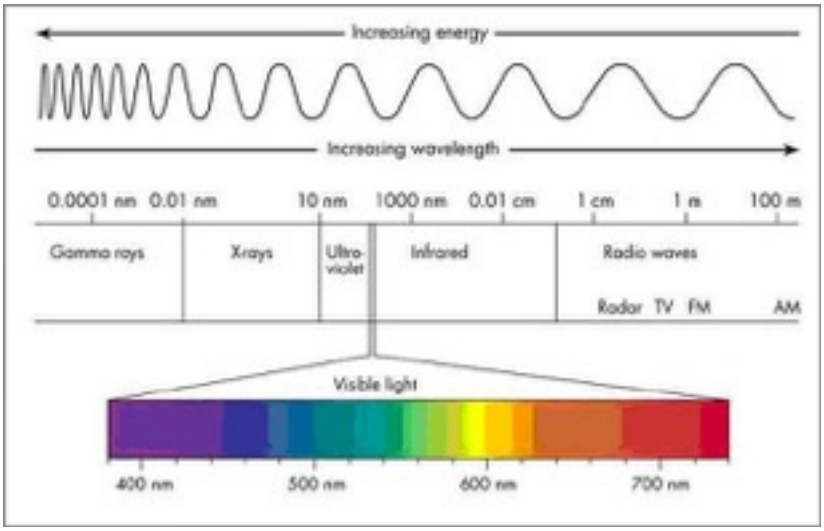
01. Wavelength

Forms of electromagnetic radiation like radio waves, light waves or infrared (heat) waves make characteristic patterns as they travel through space. Each wave has a certain shape and length. The distance between peaks (high points) is called wavelength.



Crest, Trough and Wavelength



02. WaveLength Visibility

Our eyes are sensitive to light which lies in a very small region of the electromagnetic spectrum labeled "visible light". This "visible light" corresponds to a wavelength range of 400 - 700 nanometers (nm) and a color range of violet through red. The human eye is not capable of "seeing" radiation with wavelengths outside the visible spectrum. The visible colors from shortest to longest wavelength are: violet, blue, green, yellow, orange, and red. Ultraviolet radiation has a shorter wavelength than the visible violet light. Infrared radiation has a longer wavelength than visible red light. The white light is a mixture of the colors of the visible spectrum. Black is a total absence of light.

03. Color Temperature in Kelvin scale

All objects emit electromagnetic radiation, and the amount of radiation emitted at each wavelength depends on the temperature of the object. Hot objects emit more of their light at short wavelengths, and cold objects emit more of their light at long wavelengths. The temperature of an object is related to the wavelength at which the object gives out the most light.