



Vocabulary: Herschel Experiment



Vocabulary

- Electromagnetic radiation – energy made up of electric and magnetic waves that travel at the speed of light in a vacuum.
 - Examples of electromagnetic radiation include gamma rays, X rays, ultraviolet radiation, visible light, *infrared radiation*, microwaves, and radio waves.
- Infrared radiation – electromagnetic radiation with wavelengths that range from $0.7\ \mu\text{m}$ to $300\ \mu\text{m}$ ($700\ \text{nm}$ – $30,000\ \text{nm}$).
 - Infrared waves are longer than visible light and shorter than microwaves.
 - Infrared radiation is felt as heat.
- Prism – an optical device made of clear glass or plastic that is used to divide white light into a spectrum of colors.
 - Prisms often have triangular bases and rectangular sides.
- Ultraviolet radiation – electromagnetic radiation with wavelengths that range from $0.01\ \mu\text{m}$ to $0.4\ \mu\text{m}$ (10 – $400\ \text{nm}$).
 - Ultraviolet waves are longer than X rays and shorter than visible light.
 - Ultraviolet radiation causes sunburn.
- Visible spectrum – the band of colors produced when white light is passed through a prism or similar device.
 - The sequence of colors in the visible spectrum is red, orange, yellow, green, blue, and violet. Red light has the longest wavelength, and violet light has the shortest wavelength.
 - Visible light has wavelengths that range from $0.4\ \mu\text{m}$ to $0.7\ \mu\text{m}$ (400 – $700\ \text{nm}$).

