

Electromagnetic (EM) Waves

Characteristics:

Waves do not need matter to transfer energy

How are they made?

The vibration of electrically charged particles creates a magnetic field

Electromagnetic Spectrum:

Illustrates the range of wavelengths and frequencies of EM waves

Types of EM Waves:

Radio waves
X-rays
Light waves
microwaves
gamma rays
Infrared
ultraviolet

Absorption

Characteristics:

- transfer of light energy to an object
- makes things warmer

Example/Illustration:

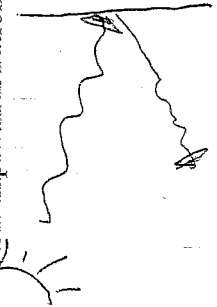


Reflection

Characteristics:

- Occurs when a wave strikes and bounces off an object
- Allows us to see objects and color

Example/Illustration:

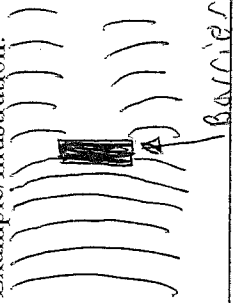


Diffraction

Characteristics:

- Bending of waves around a medium
- the amount it bends depends on wavelength and the size of the barrier

Example/Illustration:



Refraction

Characteristics:

- Bending of waves as it moves from one medium into another
- Speed and wavelength change

Example/Illustration:

