

Electromagnetic Radiation and Light: Objectives and Vocabulary

By referring to the various handouts, notes, lab activities and homework covered during this unit, then at the end of this unit of study, each student should be able to:

1. Explain what Electromagnetic radiation is and how it's produced.
2. Know what the electromagnetic spectrum is an arrangement of and what it's based on.
3. Know the types of Electromagnetic Radiation in the proper order from long to short wavelength. Also know the main uses for each of these types.
4. Know the colors that make up visible radiation in the proper order from long to short wavelength. Also know how light can be separated into its component colors.
5. Know the three basic types of electric lights, their advantages and disadvantages.
6. Know the terms used to describe the degree to which light is able to pass through matter.
7. Explain why we see objects to be the color that they are.
8. Explain how color filters work.
9. Know the primary light colors and the primary pigment colors, and how they compare with each other.
10. Explain what is meant by secondary and complimentary colors.
11. Know how the human eye detects colors, as well as light and dark.
12. Explain the meaning and cause of color blindness.
13. Explain what causes a shadow and the names for the parts of a shadow.

Vocabulary:

Electromagnetic radiation	Visible Radiation	Transparent
Electromagnetic spectrum	Ultraviolet radiation	Color Filters
Photon	Ozone layer	Primary Light Colors
Radio waves	X rays	Primary Pigment Colors
AM waves	Gamma Rays	Complimentary colors
FM waves	Incandescent	Secondary colors
Radar	Fluorescent	Color Blindness
Microwaves	LED	Umbr
Infrared radiation	Opaque	Penumbra
Thermogram	Translucent	