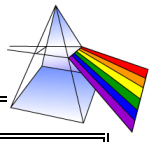
Unit 16 Plan: ***Fundamentals of Light and Color***
Physics1 @ PalmHarborUniversityHigh



Day	Date	Topic	Assignments Due / Schedule
1		Ch 16.1 Notes **CW#1: 1-6 (p. 436)**	**HW#1: 8, 9,11,12 (p. 438)**
2		Finish Notes Optical Illusions	
3		Color and Polarization **CW#2: 18-22 (p. 447)**	
4		More on Color and Polarization	**HW#2: (p. 453)** **48-51, 53, 54, 57, 59, 61,62, 65, 68**
5		Review	
6		Unit Test	

Note: *Homework is due on the day following the assignment, unless otherwise noted.*

Objectives / **Essential Learnings**: (key terms in **bold**)

1. Identify the fundamentals of light distinguishing it as an electromagnetic wave.
2. Know the wavelength range of light within the electromagnetic spectrum.
3. State the speed of light and be able to solve problems involving the speed of light.
4. Understand the ray model of light.
5. Be able to define luminous intensity (I), luminous flux (P) and illuminance (E) and distinguish between the lumen, lux, and candela.
6. Describe how the brightness of a light source is affected by distance.
7. Define transparent, translucent, and opaque and give examples of each.
8. Understand the formation of color by addition of light and by subtraction by pigments or dyes.
9. Define polarized light and describe methods of producing polarized light.

$$E = \frac{P}{4\Pi r^2} \qquad I = \frac{P}{4\Pi}$$

$$E = \frac{I}{r^2}$$

$$c = \lambda f$$

$$c = 3.00 \times 10^{8}\ m/s$$