**UNIT 10: LIGHT – THE STUFF WE SEE WITH. REFLECTION (15 Days)**

Upon completion of this unit, the student should be able to:

1. Describe the electromagnetic spectrum and how visible light fits into it.
2. Define parallax and its application to the real world. Explain how to determine the position of an object or image using two lines of sight.
3. Define terms associated with visible light sources, including scattering, reflection, intensity, illuminance, opaque, translucent, and transparent.
4. State the basic law of reflection and apply it to plane and curved mirrors.
5. Given a plane mirror and an object’s position and size, find the image’s position and size.
6. Given an object and a curved mirror, find the location, size, and type of image formed using both a ray diagram and the proper formula.
7. Contrast between virtual and real images.
8. Use the wave equation to solve for velocity, wavelength, or frequency given two of the quantities.
9. Apply the inverse square law to predict the change in apparent brightness of a luminous object given the change in distance to the object.
10. Explain how scattering causes such phenomena as blue sky, blue moon, and red sunset.
11. Distinguish between specular and diffuse reflection and explain the cause of each.
12. Explain how 3D glasses work.
13. Distinguish between divergence and convergence.

**Reference: Holt Physics (Serway/Faughn), Chapters 13**

**Homework: Light Study Sheets 1 & 2, Magic Cylinder**

**Labs: Images/Draw Your Face, Reflection, Ripple Tank**