**Optics & Light: My Learning Target Checklist**

I can describe five basic properties of light (straight line, light speed, reflection, refraction and dispersion, and what it can travel through) (308-8)

I can describe the laws of reflection of visible light (regular vs diffuse, < incidence = < reflection) (308-8)

I can explain definitions for angle of incidence and angle of reflection. (308-9)

I can estimate angles of incidence and reflection. (208-9, 209-6)

I can ask questions about reflection in a testable form. (308-10, 210-11)

I can predict the effect that see through objects of different thicknesses will have on the angle of refraction of light. (308-10, 210-11)

I can estimate angles of refraction. (308-10)

I can describe how visible light is refracted. (308-10)

I can find the focus point of a convex lens (focal length, focal point and convex). (109-5)

I can describe how lenses have developed over the years through trial and error. (109-5)

I can give examples of lenses in my everyday life and lenses that have helped science. (111-3)

I can describe different types of electromagnetic radiation. (308-11)

I can compare the properties of visible light to other forms of electromagnetic radiation. (308-11)

I can correctly use and define the terms frequency and wave length. (308-12)

I can describe some positive and negative effects of inventions associated with electromagnetic radiation. (112-8, 113-2)

**Optics: Key Terms for Unit**

1. Read through the list of terms:
   1. mark an (✔
   2. mark a (**\***) if you have heard the term but couldn’t explain it
   3. mark a (?) if you have never heard the term before

* Light
* Natural light source
* Artificial ( man made) light source
* Incandescent
* Fluorescent
* Phosphorescent
* Chemiluminescent
* Bioluminescent
* Ray Model
* Ray Diagram
* Translucent
* Transparent
* Opaque
* Reflection
* Reflected Ray
* Angle of Reflection
* Angle of Incidence
* Incident Ray
* Law of Reflection
* Concave (lens)
* Convex (lens)
* Refraction
* Microscope
* Laser
* Angle of Refraction
* Retina
* Iris
* Pupil
* Optic Nerve
* Blind Spot
* Focus
* Near-sighted
* Far-sighted
* Telescope
* Binoculars
* Radiation
* Electromagnetic spectrum
* UV light
* Infrared light
* Visible Light
* Microwaves
* Radiowaves
* X-Ray
* Gamma rays
* Frequency
* Wavelength
* Crests/Troughs

2) In the columns below, fill out what you know already in relation to light & optics, what you wonder about light & optics and what you think we will learn based on the key terms and outcomes list.

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| --- | --- | --- |
| Know | Wonder | Learn |
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