Sci 8 **Reflection/Refraction Take Home Assignment /20**

**Purpose:** Use your knowledge of MIRRORS, LENSES, REFLECTION, and REFRACTION to demonstrate how light rays behave when they strike different mirrors and lenses. And perhaps get the longest distance of light travelled as possible.

**What to do**:

Help an imaginary ray of light move from the START position to the END position.

* You can only use a standard 8.5x11 paper
* You must EVERY item.
* You can use EACH item only ONCE.
* Use a RULER to draw beams of light.
* Use ARROWS to indicate the direction light is travelling.
* LABEL each item (eg. Concave mirror, convex lens)
* You DO NOT need to indicate exact angles, just indicate if the rays converge/diverge/go straight when they are reflecting or transmitting through
* It is fine if some rays diverge off the page, you only need to track one to the next lens or mirror.
* Assume your beam of light does NOT diminish throughout the experiment.
* *NOTE: The mirrors have little hatch marks indicating the back of the mirror.*
* *If you can open this word doc on a computer: You may click on each image to move it and rotate it to the correct position. Save your file as “Refection/Refraction, Your Name” in Office 365. If you cannot open in Microsoft Word: simply draw each image on a plain piece of 8.5 x11 paper, and using a ruler, draw the light rays that either reflect or pass through each item. Take a picture, save in Office 365 as “Reflection Refraction, Your Name”.*
* SUBMIT to the appropriate assignment on Teams. Click “TURN IN” in upper right.
* *OPTIONAL CHALLENGE: Use the laws of reflection ad refraction of light to bend and reflect light around the page to get the LONGEST path possible:*
	+ MEASURE and LABEL EACH segment (path to next lens/mirror)
	+ ADD up your TOTAL number of centimeters your ray of light has travelled and indicate your total on the BOTTOM RIGHT of your page.

**LENSES TO USE:**



**MIRRORS TO USE:**



**Marks Breakdown:**

* 7 pts for correct labels of each item
* 3 pt for using ruler
* 7 pts for correct reflection/refraction
* 3 Neat and tidy