Cosmo Notes- Day 1 (in Notebook)

1. Diagram the parts of a wave; include a definition for each part next to your labeled picture.

-crest

-trough

-amplitude

-wavelength

-Include a definition of a wave (look it up!)

-Relate waves to packets of energy

-Give examples of types of waves

2. Define frequency and draw an example of a wave with a high frequency and a low frequency. Record the frequency for each wave under your drawing. Include the units for frequency (Hertz)

3. Write a set of relationships between…

* Wavelength and frequency
* Wavelength and energy
* Frequency and energy

4. Glue in a picture of the Electromagnetic Spectrum. Highlight with different colors or labeled arrows.

* The most to least energy
* The longest to shortest wavelength
* The highest to lowest frequency
* The speed of all types of light (look it up! And include metric units)

5. Glue in a picture of a prism separating light into its colors. Label and color…

* The white light entering in
* The ROYGBIV colors (in the correct locations!) exiting
* Label the longest to shortest wavelength color
* Label the highest to lowest frequency color
* Label the highest to lowest energy color
* Include a definition for refraction that explains why light bends (look it up!)

6. Glue in or draw a picture of a longitudinal wave vs a transverse wave

* Label each type of wave including which is a sound and which is a light wave
* Label the crests and troughs of each type
* Which requires a medium to travel through and why? (hint how does this wave travel that makes it NEED something to travel through)
* Which type of wave does NOT require a medium to travel through and why? (Hint: light has a magnetic part that MAKES an electrical part…the electrical part MAKES the magnetic part …and it “pushes” itself along...ok now you’ve got it!)
* Color the magnetic parts and the electrical parts of the light wave different colors