**Ch 13 – Light, Reflection, and the Electromagnetic Spectrum Review Sheet**

1. The 3 behaviors of light are reflection, refraction, and diffraction. Give examples of each.
2. Electromagnetic waves are transverse waves in which the electric field and magnetic fields are always perpendicular to each other.
3. Give examples of magnets causing electricity and vice versa
4. Recognize that EM waves can travel without a medium
5. Know the types of light in the electromagnetic spectrum. Be able to recognize each given a description. Which is the only type we can see with the rods and cones of our eyes? Why?
6. Recognize that white light is really made up of ROY G BIV
7. Light can exist as a particle and a wave. Discuss the scientists and their experiments to prove this.
8. Light can be absorbed, transmitted, or reflected off objects. Which explains why you see the colors you see?
9. Differentiate between transparent, translucent and opaque objects
10. Describe the energy conversion that makes black items hot
11. What are the 3 primary colors? How do we get secondary colors and what are they?
12. Why does the sky appear blue sometimes but reddish orange other times?
13. Recognize that mirrors are opaque objects that reflect light
14. Know the 3 types of mirrors and give examples of how/where they are used
15. Be able to calculate the angle of incidence or the angle of reflection when given one or the other using the Law of Reflection
16. Be able to draw ray diagrams for each type of mirror
17. Know the types of images each of these can produce: inverted, upright or both? Real or Virtual? Smaller? Larger? Same size? Does the distance the mirror or lens is from the object affect the image you see? How?
18. Be able to give examples of where/how each is used in the real world. For example:

Dental mirrors

Stores surveillance

Bathroom mirrors

Rear view on car

Side mirror on cars

Fitting rooms

Telescope

Make-up mirror

1. Differentiate between polarized and non-polarized light. What are examples of polarization and why can it be useful?
2. Does light behave as a wave or particle? Who studied this? What did they believe?