Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_ Ast: \_\_\_\_\_

**WAVE PROPERTIES & INTERACTIONS Notes**

**I. WAVE PROPERTIES**

**1) Identify the two types of waves and draw a diagram of each:**

**2) Define and label:**

* Crest:
* Trough:
* Wavelength:
* Amplitude:
* Origin:



**II. LIGHT INTERACTIONS**

**3) Spear-Fishing Demo**

* Describe what happens if you aim the “spear” directly at the image of the fish and “shoot”:
* Where do you have to aim to get the “spear” to actually HIT the fish?
* Refraction:
* What happens to the light coming from the fish when it leaves the water and begins travelling through air toward your eye? Draw a diagram.

**4) Mirror Demo**

* How do the reflected angles of the laser compare to the incoming angles?
* Reflection:
* Law of Reflection:
* Draw a diagram:

**5) Polarized Film Demo**

* Describe what you see when you look through one polarized film:
* What did you see as you rotated the second polarized film perpendicular to the first?
* Why does this occur? You may draw a diagram if you wish.

**6) Colors Demo**

* What do you see when one of the colored lights shines at the object?
* What do you see when two of the colored lights shine at the object?
* What do you see when all three colored lights shine at the object?
* Color depends on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the light. Light that contains all of the wavelengths in the visible spectrum is called \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_.