Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_ Pd. \_\_\_

Design a Submarine Project

For this project, you will be working in a group of 2-3 people. Your group will need to make a google slides presentation to showcase your work. Your group will also need to present your poster to the class.

Project Questions:

These questions are to be answered on the conclusions slide.

* How did your submarine(s) show that density and buoyancy are related?
* Explain what a hovering submarine is using the words density, buoyancy, weight and buoyant force.
* How did your submarine(s) show that weight and buoyant force are related?

Project Objectives:

1. With your team, plan and decide on materials to put inside a film canister to make it float, hover and sink in a beaker of water.
2. Engineer and test each submarine.
* REMEMBER, YOU NEED A SINKING, FLOATING, AND HOVERING SUBMARINE.
1. With the successful submarines, find the mass (using a balance), volume, and density.
2. Create a google slides presentation to showcase work.
	1. Title Slide
	2. List the final materials inside each submarine.
	3. Explain planning and modifications of submarines.
* On 1 or 2 slides, state what the initial plans were for each submarine and the modifications made to each to achieve floating, hovering and sinking.
	1. Draw a force diagram (include only FB and FG) for each submarine.
* Find the weight of each submarine
* Find the buoyant force ( 1 g = 1 mL)
* You may want to include pictures of your submarines on this slide.
	1. Write conclusions.
* Answer Project Questions using complete sentences.

Points Possible: \_\_\_\_\_\_\_\_\_\_\_\_\_ DUE DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_