

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 poster to showcase your work. Your group will also need to present your poster to the class.

Project Questions:

These questions are to be answered in the conclusions portion of your poster.

- 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.**
3. With the successful submarines, find the mass and density.
4. Create a poster to showcase work.
 - a. Explain method of planning.
 - In a short paragraph, discuss what ideas worked and didn't work.
 - b. Draw a force diagram for each submarine.
 - Find the weight of each submarine
 - Find the buoyant force (1 g = 1 mL)
 - c. List the materials inside each submarine.
 - d. Write conclusions.
 - Answer Project Questions using complete sentences.

Points Possible: _____

DUE DATE: _____