Name: _____ Date: _____ Period: _____

Buoyancy Lab: Aluminum Foil Boat and Pennies

This is a simple lab to invoke thought processes. Each student/group will be given aluminum foil and asked to design/build a boat that will hold as many pennies as possible without sinking.

Procedure

1. You will be provided with 2 sheets of aluminum foil throughout the lab. Both sheets will be10 x 10cm.
2. With one of the 10 x 10cm sheets of foil, build your boat. Describe your boat designs under the data section.
3. Make a hypothesis as to how many pennies the boat will hold in the data section Record it under the data section.
4. Place your first boat in the water container. Add one penny to the boat at a time until the boat starts to sink. Record your number of pennies (minus the one that sank it) in the data section. Be sure to dry all pennies between trials!
5. Design your second boat using knowledge gathered from experience with your first boat. Follow the same procedure for adding pennies to see how many it can support before sinking.
6. You will be graded on the maximum amount of pennies either of your boats supported. ***You will only have two trials!!***
7. Clean up any spilled water and your work area. Dry off the pennies and return them to the penny bucket.
8. Answer the questions in the data and conclusions sections.

Data Collection Chart

Hypothesis: The boat will hold _____ pennies.	Description of boat design **and** why you chose that design.	**Draw** a picture of your boat.	What are the dimensions of the boat? **(built)**	**Actual Result:** My boat DID hold _____ pennies.

Conclusion

1. Describe the design of your first boat- what logic did you use to design your first boat?

2. Describe the design of your second boat. What modifications did you make to improve on your first design?