

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Lab on Density and Surface Area

**Problem:** How can you make a boat out of 10 x 10 cm<sup>2</sup> of aluminum foil that will still float with at least 15 pennies in it?

- 1) Write the density equation: \_\_\_\_\_
- 2) Write down your **hypothesis** (what you think is going to happen).  
Be specific, how many weights can it hold, what is going to make it sink?  
\_\_\_\_\_  
\_\_\_\_\_

- 3) What are 2 **factors** that affect how well the boat will stay afloat?  
\_\_\_\_\_  
\_\_\_\_\_

- 4) What does an object of lower density do when it is placed in a liquid of higher density? \_\_\_\_\_

- 5) What does an object of higher density do when it is placed in a liquid of lower density? \_\_\_\_\_

- 6) **After your boat sinks**, if you tried to place the same (wet) pennies in your boat, what would most likely happen compared to what the first time?  
\_\_\_\_\_

- 7) **Conclusion:** Explain how your hypothesis was right or wrong, what could you do differently next time to make the experiment better?  
\_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Lab on Density and Surface Area

**Problem:** How can you make a boat out of 10 x 10 cm<sup>2</sup> of aluminum foil that will still float with at least 15 pennies in it?

- 1) Write the density equation: \_\_\_\_\_
- 2) Write down your **hypothesis** (what you think is going to happen).  
Be specific, how many weights can it hold, what is going to make it sink?  
\_\_\_\_\_  
\_\_\_\_\_

- 3) What are 2 **factors** that affect how well the boat will stay afloat?  
\_\_\_\_\_  
\_\_\_\_\_

- 4) What does an object of lower density do when it is placed in a liquid of higher density? \_\_\_\_\_

- 5) What does an object of higher density do when it is placed in a liquid of lower density? \_\_\_\_\_

- 6) **After your boat sinks**, if you tried to place the same (wet) pennies in your boat, what would most likely happen compared to what the first time?  
\_\_\_\_\_

- 7) **Conclusion:** Explain how your hypothesis was right or wrong, what could you do differently next time to make the experiment better?  
\_\_\_\_\_  
\_\_\_\_\_