

Name _____

Date _____

FOIL BOATS

1. What happens to a square of aluminum foil when placed in water? Record your observations: _____

2. What happens when you crush a square of foil and place it in the water? Record your observations: _____

3. Form a square of foil so it will float on the water. Place the "boat" on the surface of the water and put paper clips on it one at a time until it sinks. Record the results in the table. Redesign your boat and repeat the procedure.

WILL IT FLOAT? HOW MUCH WILL IT HOLD?

Draw your three best boat designs	Length, Width, Height	Mass of Cargo
a.		
b.		
c.		

4. Make inferences about **why** your boat floats. _____

5. Did your boat support the same number of paper clips the first two times? _____
What might have caused it to support more, less, or the same number of paper clips? Explain: _____

6. What happened when the boat was redesigned? Did it support more weight? Explain why: _____

7. Tell why your best boat design is so special. What makes your boat hold more than others? _____

8. What happened to the waterline on the outside of the boat as the paper clips were added? _____

9. If you doubled the size (area) of the foil (from 4"x4" to 4"x8") predict how much more weight (how many more paper clips) you think that your boat will support. Explain: _____

Bonus: Could other materials be used to make boats? Find out what kinds of materials modern boats and ships are made of today. _____
