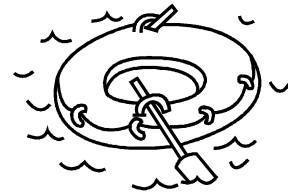


Name: _____

RAFT DESIGN



PART 1: IDENTIFY PROBLEM

Objective

Students will design and construct a raft that can support the greatest amount of weight before sinking.

Materials & Tools

- | | | |
|------------------------------|---------------------|---------------------|
| 1. 4 craft sticks | 4. 4 straws | 7. Scissors |
| 2. 1 plastic sandwich baggie | 5. 12" string | 8. Elmer's Glue |
| 3. 1 sheet aluminum foil | 6. 12" masking tape | 9. Rule (measuring) |

Limitations

1. You may only use the materials provided
2. Device can not be attached to the testing pool
3. Device must be able to float.
4. Sizes: length & width between 3" – 6"

Instructions

1. Brainstorm & sketch minimum of 3 ideas for your devise.
2. Attain materials
3. Construct your device
4. Test device
5. Redesign

Testing

1. Instructor will provide weights (pennies)
2. When water enters your raft and any of your pennies are submerged in water, your testing trial is over *Submerge is defined as water covering all surfaces
3. If any of your pennies go overboard, they will be deduced from your total amount.
4. Count the number of pennies as you add them to your raft.

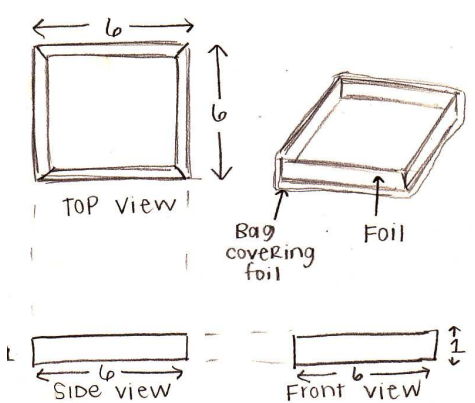
PART 2: BRAINSTORM IDEAS

A. Using a pencil, draw thumbnail sketches that communicate your ideas in the space below.

Idea 1	Idea 2	Idea 3

Name: _____

B. Pick your favorite raft idea from the sketches above, and draw in pencil what the raft will look like from the front, top, and side view. Label important materials and dimensions.

	 <p>Example</p>
Top View	
Side View	Front View

PART 3: TESTING TRIALS

A. How many pennies did your raft hold? _____

PART 4: CONCLUSIONS (USE COMPLETE SENTENCES PLEASE!)

A. What would you change about your raft to make your design better?

B. List one pro and one con for your raft design.