

Penny Boat Challenge

The Problem:

Design a boat out of aluminum foil that will hold the most number of pennies and still stay afloat.



Rules:

- Construct your boat using **only** one piece of the heavy duty aluminum foil (30 cm x 30 cm) provided.
- Pennies are the only item you may add to your boat.
- Slowly add pennies to your boat. Once water enters the boat, or if any part of the boat touches the bottom of the container, your turn is over.
- The last penny added will not count in the total amount held.
- Predict how many pennies your boat will hold: _____
- Use your lab journal to make sketches of your boat and to keep track of your trials, errors, and successes.

After the competition:

1. My boat held _____ pennies.
2. If each penny had the mass of 2.5 grams*, my boat held _____ grams total.
3. The boat that held the most pennies belonged to _____ and held _____ pennies.
4. How did you place the pennies into your boat? Did you have a strategy?

Reflection: Write about the strategies you used to solve this problem. What worked, what didn't, and what would you change if you did this again?

*assume post-1982 pennies

Cut along dotted lines and paste into lab journal

