

Boat

Challenge:

Work with your group to build a boat that can float while holding pennies. The winning group will have the boat with the best building cost to pennies floated ratio: cost/penny floated.

Skills:

* Reading a scale
* Metric unit conversions
* Dimensional analysis
* Significant figures

Instructions:

1. Build a boat using the materials provided. Keep careful track of the amount of aluminum foil and masking tape used. **Record these amounts with the correct precision.** Remember, each piece of material has an associated cost.
2. Float your completed boat in the water and place pennies, one at a time, onto the boat until it sinks.
3. Calculate the total cost of your boat based on the amount of materials required. **Show your work.**
4. Calculate the building cost in units of $/penny. **Show your work.**

Materials and Cost:

Aluminum foil, $20.00 per square meter

Masking tape, $0.75 per centimeter

Scissors

Pennies (provided at the sink)