Name(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  | **Activity Guide - Aluminum Boats** |  |
| --- | --- | --- |

## Goal

Build a boat that holds the most possible pennies, using a piece of aluminum foil. You will build two boats and will try to improve your design between the first and the second.

## Rules

* You may only use a single piece of foil to build your boat
* You may not touch or adjust your boat once it is in the water
* You must add pennies one at a time

## Develop a Plan

* What kind of boat does your group plan to make? Write a description or draw a picture below.
* What are the strengths of this design? What possible weaknesses might this design have?

## Test Your Boat

* How many pennies did your boat hold?
* Why did your boat eventually sink? What needs to be improved?

## Evaluate and Improve

* What are the most common kinds of problems you see among the boats tested?
* What ideas seem to be working well?

## Develop a Plan

* What kind of boat does your group plan to make? Write a description or draw a picture below.
* What are the strengths of this design? What possible weaknesses might this design have?

## Test Your Boat

* How many pennies did your group’s new design hold?
* Why did your boat eventually sink? What needs to be improved?

## Reflect

* How did working in a team make this activity easier?
* How did it make the activity more challenging?
* What helped your group overcome these challenges?