

Foil Boat Challenge



Students will use sheets of aluminum foil to build “boats” and test them to see how much cargo they can hold.

Materials

- Foil Sheets (provided in kits, loose in bottom of box)
- Pennies (from home, could also be other “weights”)
- Any tub or bucket that can hold water (from home)
- Water

Have students find the aluminum foil sheets at the bottom of the box. They will also need to collect some weights (pennies work really well) and a tub or bucket of water. Might be best to do this outside. Challenge students with the following questions and ideas:

- Can you build a boat out of foil that will float and keep it’s “passengers” dry? How many passengers (pennies) do you think it can hold?
- Encourage students to think about their design up front. What do they think will help their boat hold the most pennies/people?
- Once the challenge is set, you can let them explore and try out different designs. They should have plenty of foil to try at least 5 or 6 different designs.
- Encourage them to try and improve their boats. This is part of being an engineer. They should try and re-design multiple times, working to improve the outcome! Be sure to tell them to keep (or take a picture) of their most successful boat design.

Additional Guiding Questions

- How many passengers (pennies) do you think it can hold?
- What do you think will help your boat hold the most pennies/people?
- What elements of your design might be most important?