



ALUMINUM BOAT CHALLENGE

IDEAL FOR UPPER ELEMENTARY GRADES

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DESCRIPTION

Using the basic principles of engineering design, your goal is to design and build an aluminum foil boat. Your boat design is entirely up to you, but you'll want to consider a design that could hold as many pennies as possible. How does that objective change your design plans? How many pennies would you like your boat to hold before it sinks? Lisa walks you through this project and you just might be surprised by the results!

DISCUSSION

- What other design elements to the boat could impact the number of pennies it can carry? Make one or two design changes to your boat, and make a prediction as to whether it will now carry more pennies or fewer due to the changes you made.
- What do you think would happen if instead of water, you tried ranch dressing or split pea soup! Do you have a prediction about what the effect would be and why?

SAMPLE TN STANDARDS

Science

5.ETS1: Engineering Design

5.ETS2: Links Among Engineering, Technology, Science, and Society

Mathematics

5.MD.C.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

MATERIALS

- Aluminum foil roll
- Ruler
- Scissors
- Towel
- Paper
- Pen/Pencil
- LOTS of pennies or another single type of coin
- Mixing bowl
- Water

