DISCOVERY MUSEUM at Home

Everyday Engineering

Tinfoil Ferries

What you need:

- Aluminum foil
- Ruler
- Scissors
- Pennies (Or any other items that have a uniform size, shape and weight, and that you have a lot of!)
- Container with water. (Plastic storage bin, sink or bathroom tub.)

What you do:

1. With your ruler and scissors, cut the aluminum foil into squares. A good size is 6 inches x 6 inches or 8 inches x 8 inches.
2. Construct a boat using just one square of the aluminum foil.
3. Test your boat to make sure it floats.
4. Predict how many pennies you think your boat will hold.
5. Once you have made a prediction, begin adding pennies! Adding pennies one at a time will help you keep count and let you to see exactly when your boat sinks.
6. How many pennies did your boat hold? How does this compare to your prediction?
7. Make changes to the design of your boat and try again!

Things to try:

- Try using different size squares to build different boats. How does the size of the square you start with compare to how many pennies your boat can hold?
- Create a chart to track changes in your boat design, your predictions and how many pennies your boat actually holds.
- Once you build a boat using just one square of aluminum foil, try building a boat using two squares. What changes can you make to your design?
- Build boats of different shapes. How does a square boat compare to a circle or triangle boat?