

SCIENCE FAIR CENTRAL

MAKE. CREATE. EXPLORE.



BUILD A BOAT

What We Want to Find Out

Can you build a boat that will hold 20 pennies?

Procedure

Place 10 drinking straws, 12 inches of plastic wrap, tape, and scissors on the work space in front of your child. Brainstorm types of boats he or she might have seen in books, movies, or in real life. Then, challenge your child to construct a boat out of the materials that would hold at least 20 pennies. After the boat has been built, see if it will float by placing it in a sink or tub filled with water. If the boat cannot float, help your child rework his or her design. Once the boat can float, place one penny at a time on the boat until all 20 pennies are added. If the boat sinks before 20 pennies are added, revisit the design and keep trying! What features helped keep the boat afloat? What happens to the boat when you add more pennies? What happens to the boat if you do not distribute the pennies evenly?

Science Behind the Fun

Simple boats float because the material they are made of is lighter than water. Heavy ships can float because the water they are floating in pushes upward against them. The boat is pushing down on the water and the water is pushing up. The water pushes up harder than the boat pushes down, allowing the boat to float.

Materials

- Drinking straws
- Plastic wrap
- Scissors
- 20 pennies
- Shoebox size tub of water (or larger)
- Tape

Tips

It may be easier to begin building the boat as a raft, building the sides next. Another boat-building option is to mold a boat out of aluminum foil instead of using drinking straws.

Still Curious?

You can learn more about boats and other sea vessels at <http://www.noaa.gov/>

