

Toothpick Boat

Purpose:

The purpose of his project is to plan, design, create, and test a boat that is made entirely out of toothpicks and powered by a 3v DC motor. This project will develop research, mechanical, documentation, imagination, and time management skills.

Restrictions:

Your boat must be made entirely out of toothpicks. You may use glue, caulk and paint for the assembly and decorations. You cannot use any pre-made or store bought ship type items for any part of your boat. The prop, wheel, fan, or shaft will need to be created and may be made of a material other than toothpicks. The motor must power your boat. You will use a switch to turn on and off your motor. Your boat must navigate across the width of a pool (~ 20 feet) and not become a submarine.

Brainstorm/Plan:

Sketch several types of boats. Boats have hulls, they are not rafts or submarines. Keep in mind that you will have to build this boat with toothpicks.

Design:

Make a scale drawing of your boat. Include the schematics of your circuit.

Creating:

Build your boat. Do your own tests to see if your boat will float and move.

Testing:

You must have a viable boat in order to go to the testing site. We will be testing the boats at a pool sometime in the last two weeks of the quarter.

Report:

Your report should follow the standard report format.

Important Information:

Design:	April 8, 2011	Design:	10%
		Paper:	50%
Boat Due:	May 9-13, 2011	Completed Project:	25%
		Testing:	15%
Paper Due:	May 19, 2011	Total:	100%

Be Creative and Have Fun