



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Jessica M. Fallon	Project Number J0107
Project Title Which Hull Style Will Go the Mile?	
Abstract Objectives/Goals To determine the affect of boat hull shape on the time it takes to move a boat some distance at certain power levels. I believe that the catamaran hull will take less time. Methods/Materials I constructed four boat hulls with identical weight and static length at the waterline, all made from Styrofoam and fiberglass: a barge, a cruise ship, a vee-hull, and a catamaran. One radio-controlled boat motor was transferred from hull to hull to eliminate drive differences. The hulls were timed as they were propelled back and forth across a 25-meter course at five power settings. Results The vee-hull consistently reached the end of the course more quickly than the other hull shapes at every power setting. The barge always stopped accelerating first, its greater drag resulted in slower speeds. Conclusions/Discussion The shape of a boat hull affects the efficiency of transport across water. Less surface area in the water when the hull is in motion appears to be related to the time it takes to traverse the course.	
Summary Statement This project investigated how the shapes of four boat hulls affects drag and efficiancy over a 25 meter course.	
Help Received My father bought the motor and the materials used to construct the boats. He assisted in the construction by holding the guides as I pulled the hot-wire Styrofoam cutter. He also indicated when the boat crossed the far end of the course so I could stop the stopwatch. My mother helped type the report.	