CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)
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Project Number
36012

Project Title
Do Sail Size and Speed Affect Efficiency?

Abstract

Objectives/Goals
The objective of this project is to determine advantages of different sails in different scenarios.

Methods/Materials
Pool, Boat, 3 Triangular Sails, 3 Rectangular Sails, Large Circular Fan. Recorded the amount of time needed for the various sails to sail 3 and 6 meters.

Results
Triangular sails were faster in the 3 meter race with higher acceleration and maneuverability. Rectangular Sails were faster in the 6 meter race with a more constant speed as they moved further away from the fan. Repeated trials were conducted to determine the average speed of each sail.

Conclusions/Discussion
Repeated trials determined the advantages of various sized and shaped sails. These advantages can be translated to using different sails in different scenarios to make sailing more enjoyable.

Summary Statement
I conducted many trials with self-constructed sails and a boat which determined each sails advantages.

Help Received
I received help in constructing the boat and sails and running the trials from my dad.