CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY

Name(s)
Miles J. McGinley

Project Number
J0120

Project Title
Hovercraft Mania

Abstract

Objectives/Goals
The goal of my project, Hovercraft Mania, was to discover the maximum payloads, or maximum weight, of different sizes of self-constructed hovercrafts. When I tested the payloads I would record the maximum height of the hovercraft. Then, add weights to the hovercraft and when the maximum height of the hovercraft started to decrease then I recorded that weight on the hovercraft and run the test two times with two speeds of the electric leaf blower used to create the lift in the hovercraft and then average the weights of both test runs.

Methods/Materials
The materials used in my project consist of: Polyplastic (6mil), JT staple gun, JT 1/2 inch staples, duct tape, 3 pieces of 1/2 inch plywood, three coffee can lids, three 2 1/2 bolts, six washers, three nuts, electric leafblower, weights, tape measure, electric drill, electric saw, hobby knife, safety gloves, safety goggles (for cutting wood), plastic screw-top bottle cap, and a pen.

Results
For my results, the size 122 by 122 centimeter hovercraft would work the best if it was used on speed two of the electric leaf blower used. The power and the size of the hovercraft is believed to create more lift, enabling it to float on the largest cushion of air. I did support my hypthesis because my hypothesis was that thelargest size hovercraft (122x122cm) on speed two would work the best if it was used in everyday life.

Conclusions/Discussion
My science fair experiment has taught me a lot. It has also improved my construction skills. For my experiment I was testing to see which design of hovercraft would work the best if it was used in everyday life. My hypothesis was that the largest hovercraft, 122 by 122 centimeters on speed 2, would work the best over all. I did support my hypothesis because the lift average on both speeds, was slightly increased from the other two designs. The maximum payload was also greatly increased from the other two designs.

Summary Statement
My project is about testing the maximum weights on different sized hovercrafts, if used in everyday life.

Help Received
My father helped me construct the hovercrafts because he is a contractor.