CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY

Name(s)
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Project Number
J0205

Project Title
Wheels: Is Bigger Really Better?

Abstract

Objectives/Goals
To determine if the outside diameter of a longboard's wheel affects the speed of a longboard moving down a hill.

Methods/Materials
In our experiment we tested 70 mm, 65 mm, 62 mm, and 59 mm diameter longboard wheels down a 57 foot concrete slope. We recorded the time it took the longboard to reach the bottom of the slope, and then converted the time into speed.

Results
When using the largest wheels, 70 mm, the averge speed was 5.49 feet per second. The 65 mm wheels traveled 5.93 feet per second. When using the 62 mm wheels, the average speed was 5.58 feet per second. When we put on the smallest wheels, 59 mm, the average speed was 5.70 feet per second.

Conclusions/Discussion
In our hypothesis we stated that the largest diameter wheels (70 mm) would have the fastest speed. The 70 mm wheels moved the longboard at an average speed of 5.49 feet per second. On the other hand the 65 mm wheels moved at an average speed of 5.93 feet per second, therefore our hypothesis was not supported. One way to make this experiment better would be to test the wheels speed going down a long and short distance slope. This would enable us to find out which wheel is faster, all-around.

Summary Statement
We discovered that the outside diameter of the wheel on the longboard did not have a significant affect on the speed of the longboard.

Help Received
Mom helped to get all of the supplies, Dad helped put the board together, our advisor helped us with any questions and oversaw our project, our expert helped answer questions and supplied two sets of wheels, and we had two donations of wheels from two different retailers.