CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
22153

Project Title
Let's Get Wet: A Comparative Analysis of Competitive Freestyle Stroke Methods

Abstract

Objectives/Goals
The purpose of this experiment is to find the answer to a personal question: What is the fastest way to swim freestyle stroke? I want to compare two different strokes to see if there is any advantage of one stroke style over the other.

Methods/Materials
For five weeks twice a week I would alternate the two strokes starting with the stroke that I had not started with the previous day. I produced a method of swimming a warm-up of 1000 yard and the swimming t set of four 50-yard sprints. All times were timed by my swimming coach.

Results
The results show that there was not a significant difference between the two strokes, because I took the standard deviation and the standard deviation of the mean (SDM.) The plus or minus of the SDM turnex out to be greater than the difference between the average times for the two strokes. However, the results show that whichever stroke was sprinted first was the faster was the faster sprint throughout the four 50's.

Conclusions/Discussion
In the 50-yard swim, it does not make a significant difference in time to swim the old way or the nex way. What does make a difference is if the stroke is swam first or second. Each of my trials proved that whatever stroke type the day started out with is the fastest stroke of that trial. Therefore, with the data I have collected it appears that neither stroke is obviously faster.

Summary Statement
I compared two methods of swimming the competitive freestyle stroke.

Help Received
My coach Larry Countryman timed every one of my sprints during the experiment. My teacher Mr. Sweet gave me advice in what way to direct my experiment and corrected my spelling.