CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY

Name(s)
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Project Number
S0201

Project Title
Golf Balls in Motion

Abstract

Objectives/Goals
To determine the mechanical design and performance characteristics of six different golf balls after they have been applied to uniform wear or use.

Methods/Materials
All balls were dropped at a set height (100 inches) using a release tube (to guarantee uniform release). The height of the bounce off of a concrete floor was recorded for each ball, and then repeated five times to get an average height for each ball. All balls were then hit with a 3 wood, fifty times in a golf practice cage. The performance/bounce of each ball was then recorded again. All balls were hit twenty-five more times each. The performance/bounce of each ball was recorded again to see if there was a difference.

Results
Each ball had performance degradation after use. The Top-Flite ball performed the best throughout the entire experiment. Maxfli also performed very well and showed the lowest percentage change in performance after use. The Scott ball was the worst ball overall; it performed the worst at the beginning and had the greatest percentage change after use.

Conclusions/Discussion
"Use" definitely affects the performance of a golf ball. Top-Flite and Maxfli were the best performing golf balls overall. Even though Maxfli performed lower than Top-Flite initially, after extended "use", I believe that Maxfli would be the best ball to use. Therefore, Maxfli has the best overall design.

Summary Statement
My project analyzes the effect on the mechanical and design characteristics of six different brands of golf balls after being subjected to uniform "wear" or "use".

Help Received
My father helped drop the golf balls form the release tube while I measured the performance height. He also helped me hit each golf ball 75 times.