



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Cambria L. Ullrich	Project Number J0222
Project Title Impact of Change: The Effects a 10 Degree Titanium Driver Has on a Titleist Pro V1 Golf Ball at Impact	
Objectives/Goals My project was to see if the repetitive impact of a 10 degree Titanium Driver on a Titleist Pro V1 golf ball would knock the ball out of balance.	
Abstract Methods/Materials I took twenty golf balls that were identical in mass and diameter and all rolled straight and true when rolled down a ramp onto an artificial putting green. I numbered the balls 1-20. I then hit ball number one 10 times, I hit ball number two 20 times and each successive ball 10 more times than the preceding ball until I hit ball number twenty 200 times. I then reweighed and remeasured each ball to see if there was a change in mass or diameter. I then rolled each ball ten times down a ramp onto an artificial putting green onto a chalk line to see if they would roll straight.	
Results I found that after the repetitive striking of a Titleist Pro V1 golf ball with a 10 degree Titanium Driver, the ball appeared to be out of balance and did not roll straight.	
Conclusions/Discussion I discovered that the repetitive deformation and reforming of a golf ball caused by the impact of a golf club can move the Center of Gravity from the Geometric Center, thus causing the ball to go out of balance. Golfers may be wise to change their golf ball more often than they think.	
Summary Statement The repetitive striking of a golf ball appeared to knock the golf ball out of balance, so it will not roll straight.	
Help Received Uncle helped build golf ball hitting machine and Father helped build artificial putting green	