



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Joseph L. Pagano	Project Number J1826
Project Title Swing Batter Batter!	
Abstract Objectives/Goals The purpose of this project was to determine which of the four baseball bats hit a baseball the farthest. The four baseball bats were made of different materials that included: wood, aluminum, alloy and graphite. Methods/Materials The experiment involved measuring the distance the ball traveled altogether. This was done by using a spring loaded batting device, a batting tee and a baseball. The bats retracted 180 degrees and released to strike the baseball. I recorded measured distances in a journal. I compared distances that the ball traveled when hit by the different types of bats. The in-flight travel of the baseball was not very different among the four bats. The aluminum alloy bat hit the baseball the farthest because of the reflex effect that occurs when the aluminum alloy strikes the ball. This effect propels the baseball farther than other bats. Results After conducting the experiment I realized the graphite bat generated the same bat speed from the batting device as the other bats. Because of this controlled speed, the graphite bat did not hit the farthest. I believe that a graphite bat would perform better with a real batter because he/she would be able to benefit from the lightweight feature that the graphite bat offers allowing the batter to swing faster and as a result hit the ball farther. Conclusions/Discussion Based on my research I predicted that the graphite bat would hit the baseball farthest because of the special type of metal that it is made from. Graphite metal is lightweight and is used in different types of sporting equipment such as golf clubs, tennis racquets and baseball bats.	
Summary Statement Using baseball bats made of four different materials, which bat will hit the baseball the farthest.	
Help Received Father and a friend helped design and build the batting device. Mother helped with the display board. Interviewed a pitching coach for the Detroit Tigers, Chuck Hernandez.	