



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Kikei O. Wong	Project Number J1939
Project Title Bat Power	
Objectives/Goals My objective was to learn if different bat materials have an effect on the distance a softball is hit. My hypothesis was that composite material bats will hit a softball the farthest distance.	
Abstract	
Methods/Materials Materials used in experimenting were: a batting tee, a softball, a composite material bat, an aluminum material bat, a hybrid material bat, a wooden bat, a plastic bat, and a batting device made of a plywood base, a wooden column, a wooden swinging arm, a door hinge, two screw eyes, two pipe straps, and an extension spring. Methods used in experimenting were to strap a bat and hold it still using the pipe straps on the batting device, pull the swinging arm back, place a softball on the tee where the bat will hit the ball in it's "sweet spot," release the swinging arm, and measure the distance the softball travels before the softball hits the ground. This method is repeated ten times for each bat, and the average distance is taken.	
Results The plastic bat hit the softball the least farthest, an average of 1.57 meters. The wooden bat hit the softball the next farthest distance, with an average of 1.58 meters. The aluminum bat hit the softball the next farthest distance, with an average of 1.87 meters. The composite bat hit the softball the second farthest distance, with an average of 1.91 meters. The hybrid bat hit the softball the farthest, with an average of 2.14 meters. The averages show that the hybrid bat hits a softball the farthest distance.	
Conclusions/Discussion My results show that hybrid bats hit a softball the farthest distance, which do not support my hypothesis that composite bats will hit a softball the farthest. My results expand knowledge of the distance a softball bat can hit, which help other softball players know which bat product is the best for hitting. The results also expand knowledge that the density of the bat has an affect on the distance a softball is hit. It determines how loose the bat can be (for creating a whip effect), and if the trampoline effect can be applied when the ball hits the bat.	
Summary Statement The project is about finding out if the bat material of a bat affects the distance a softball is hit.	
Help Received Brother helped buy materials; Brother helped build batting device	