



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Skylar T. Frantz	Project Number J0207
Project Title Wood or Aluminum: Which Baseball Bat Hits the Ball the Furthest?	
Abstract Objectives/Goals Which baseball bat, wooden or aluminum, will hit the baseball the farthest when hit from the sweet spot of the baseball bat? Methods/Materials The purpose of my project is to determine whether an aluminum baseball bat will hit the baseball further than a wooden baseball bat. The sweet spot of the baseball bat is defined as the exact spot that will cause the ball to go the farthest. The sweet spot will already be determined. Next, I made the pendulum that will be used to test the baseball bats for consistency in hitting. Twenty-five trials were performed on each baseball bat. After my testing, I will learn which baseball bat hits the baseball the farthest. Results The results, after 25 trials, were that the aluminum baseball bat hit the baseballs further than the wooden baseball bat. Aluminum baseball bat results: Shortest distance hit = 4.64 meters. Farthest distance hit = 7.59 meters. Average distance hit = 6.55 meters. The aluminum baseball bat, on average, would hit 1.71 meters farther than the wooden bat. Wooden baseball bat results: Shortest distance hit = 3.67 meters. Farthest distance hit = 6.98 meters. Average distance hit = 4.84 meters. The wooden baseball bat, on average, hit 1.91 meters less than the aluminum bat. Conclusions/Discussion After completing my investigation, I found that my hypothesis was correct. The aluminum bat hit farther than the wooden bat because it is a harder surface and it will go further.	
Summary Statement Which baseball bat will hit the baseball the furthest...wood or aluminum?	
Help Received Dad assisted with the pendulum. Mom with typing. My teacher supervised the entire project.	