



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Quin Lin Harrill</b>	<b>Project Number</b> <b>J0313</b>
<b>Project Title</b> <b>Swing and a Hit</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of this experiment is to determine if a golf ball, softball or a baseball will go the farthest when hit by a baseball bat.</p> <p><b>Methods/Materials</b> Materials: A 2x4 and 2x6 types of wood, ABS cement, 2 inch abs pipes, regular stop watch, 2 softballs, 2 baseballs, 2 golf balls, 1 wiffle golf ball, 1 wiffle softball, 1 wiffle baseball, an Aluminum bat, drills, screws, tees and duck tape. Methods: 1. Build a batting machine by getting ABS tubes and gluing them together and put a bat in a T shape tube. 2. Hit the wiffle golf ball with the batting machine 3 times, measure the distance and record. 3. Hit the wiffle baseball with the batting machine 3 times, measure the distance and record. 4. Hit the wiffle softball with the batting machine 3 times, measure the distance and record. 5. Hit the golf ball 9 times with the batting machine, measure distance, then record. 6. Hit the baseball 9 times with the batting machine, measure distance, then record. 7. Hit the softball 9 times with the batting machine, measure distance, then record results. 8. Take the two test results and graph them.</p> <p><b>Results</b> The results show that the size of the ball does not matter because in the test results it shows that the wiffle softball went the farthest, but in the regular test it went the least distance. But, weight does matter because even though the wiffle softball is hollow, it weighs more than the wiffle golf ball or the wiffle baseball. The wiffle golf ball has the lowest weight and it went the shortest distance. The wiffle baseball came second. As I learned in the wiffle ball test, weight does matter. The inside of a golf ball is rubber and plastic. The baseball is made of hard cork, which is lighter than rubber and plastic. The softball is made of the lightest material, with is hard foam.</p> <p><b>Conclusions/Discussion</b> After conducting so many tests, the results show that the golf ball goes the farthest. My hypothesis was correct that the golf ball would go the farthest. But I was wrong about size making a difference. I believed that the golf ball would go the farthest based on just its size. But I learned that weight also determines how far the ball will go.</p>	
<b>Summary Statement</b> Is seeing which ball will go the farthest when hit by an aluminum baseball bat.	
<b>Help Received</b> Dad helped cut the balls in half with a bandsaw.	