



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

<b>Name(s)</b> Sage Nguyen	<b>Project Number</b> <b>J2023</b>
<b>Project Title</b> <b>Bounce!</b>	
<b>Abstract</b> <b>Objectives/Goals</b> Does the brand or type of tennis ball effect its bounce height and durability on a hard court? I hypothesize that tennis balls bounce height and durability will be affected by the type of tennis ball used. The brand of tennis ball will not significantly affect its height or durability. <b>Methods/Materials</b> Materials List: Penn Extra Duty tennis balls, Wilson Extra Duty tennis balls, Penn Regular Duty tennis balls, Wilson Regular Duty tennis balls, Measuring paper, Racquet, Pen, Tennis backboard. <ol style="list-style-type: none"><li>1)Record time, temperature and humidity before data collection starts.</li><li>2) Bounce height measured with a ball from each new can, four total. This is accomplished by taping measuring paper to a wall and videotaping the ball in slow motion being dropped from a height of 60 inches. By videotaping it, a more accurate measurement will be achieved.</li><li>3) Next, each of the same balls will be hit against a wall 75 times.</li><li>4) Repeat step #2 with the now #used# balls.</li><li>5)The balls are hit another 75 times against the wall.</li><li>6)Repeat step #2 again.</li><li>7)Review the video to record the bounce heights.</li></ol> <b>Results</b> With the balls brand new, Penn Regular had the highest average bounce height of 37 inches. After 75 hits, Penn Extra Duty had the highest average bounce height of 36 inches. After 150 hits, Penn Extra Duty still had the highest bounce height of 35.33 inches. <b>Conclusions/Discussion</b> I conclude that the Penn Regular Duty and the Penn Extra Duty tennis balls have a higher bounce than the Wilson Regular and Extra Duty. I also conclude that the type of tennis ball also affects the height and durability. My hypothesis was incorrect regarding the brand of tennis ball not affecting bounce height and durability but was correct in regards to the type of ball affecting bounce height and durability.	
<b>Summary Statement</b> My projects was to determine whether the brand or type of tennis balls have an effect on its bounce height and durability.	
<b>Help Received</b> My dad helped me record video of the ball drops and buy my materials; my mom helped me cut and layout my posterboard.	