



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> Bennett Adam Caughey	<b>Project Number</b>  22305
<b>Project Title</b> Streaks in Baseball: A Matter of Chance?	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of my project was to determine whether random chance alone or other factors affect the frequency of win/loss streaks in baseball. My hypothesis was that factors other than random chance affect the frequency of win/loss streaks in baseball. <b>Methods/Materials</b> I began by finding the actual frequency of streaks in the National League for 2001. Then I used two techniques to create artificial seasons based on chance alone. One was a Monte Carlo simulation using a coin flip. The other was a season based on calculated streak frequencies. Using a test of significance, I compared the Standard Deviations (SD) of the streak frequencies in the National League to the SD of the streak frequencies of the artificial seasons. <b>Results</b> The artificial season based on calculated streak frequencies yielded more comparable results than the Monte Carlo simulation. When compared to the actual National League streak frequencies, the theoretical frequencies were significantly different at both the 95% and 99% confidence. <b>Conclusions/Discussion</b> The distribution and frequency of streaks in Major League Baseball is not purely random, confirming my hypothesis. However, much of the streakiness appears to be caused by random chance. Factors contributing to deviation from randomness could include pitcher rotation or playing games in series.	
<b>Summary Statement</b> My project explored the causes of the frequencies of streaks in baseball and discovered that the frequencies are not caused purely by random chance, but by other factors as well.	
<b>Help Received</b> Father helped with writing, grammar and understanding concepts. Family friend helped set up F-test.	