CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY

Name(s)

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Project Number

33936

Project Title

How Does Elevation Affect the Break of a Curveball?

Abstract

Objectives/Goals

The purpose of my project was to find out if and how elevation affects the break of a curveball. I predict that a curveball thrown at higher elevation will travel farther and break less.

Methods/Materials

8 Nike brand baseballs and one JUGS pitching machine. Two tests were made; one at 194 feet above sea level, the other at 1,712 feet above sea level. The balls were thrown a total of 40 times at the curveball setting. Small plastic spikes and a yardstick were used to mark and measure where each ball landed.

Results

The balls pitched at an elevation of 1,712 feet on average traveled significantly farther and had less break then the curveballs thrown at 194 feet above sea level.

Conclusions/Discussion

In conclusion, my hypothesis was proven correct. At higher elevations a curveball travels farther and breaks less. I believe that pitchers should take elevation into account when pitching, because elevation drastically affects the break of a curveball.

Summary Statement

My project tested how elevation affects the break of a curveball.

Help Received

My father helped me conduct the tests by either operating the pitching machine or marking/measuring where the balls landed. He also helped me edit my report.

Preliminary