CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
Tyler J. Walker

Project Number
31602

Project Title
Catching Air: Parachutes in Flight

Abstract

Objectives/Goals
The objective of my project was to try and find out which material, between plastic, newspaper and silk, resisted gravity the most therefore making the best parachute.

Methods/Materials
I constructed a release pole using aluminum and PVC pipe and a 45 degree elbow. After designing five different release mechanisms and testing them, I chose the one that worked best and attached it to rope at the top of the pole. I made three 2X2 foot parachutes, one each from plastic, newspaper and silk. The parachutes were attached to a three ounce weight and raised to the top of the pole to be released. I performed five test flights for each different material and also five test flights for my control. The control was the weight without a parachute. The parachutes were launched from a height of 44 feet.

Results
My results show that the plastic material had the greater flight times and made the better parachute. The average flight time for the plastic was 3.938 seconds. It had the longest time in all five test flights. Next was newspaper at 3.582 seconds and the silk had an average of 3.486 seconds.

Conclusions/Discussion
In my hypothesis, I thought the silk would make the best parachute. However, I found that the plastic resisted the force of gravity the most and made the best parachute. In all 5 tests it had the longest flight. Some of the test flights were very close in length. Because of this, I decided to average the numbers so I had one number to look at. Having one number also made it easier to compare it to the test flights of the control.

Summary Statement
My project was to determine if plastic, newspaper or silk, would resist gravity the most and make the best parachute.

Help Received
My mom helped me with some of my typing and with some of my display board. My grandpa let me use his power tools and my grandma took me shopping for supplies to build my mechanisms.