



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Allison C. Frazier	Project Number J0107
Project Title Watch Out Below	
Abstract Objectives/Goals My objective was to find out if the shape of a parachute affects the rate of its descent. I believe the shape will affect a parachute's descent rate, and that the triangle will finish first followed by the square, octagon, hexagon, and rectangle. Methods/Materials Using garbage bags, washers, a nut, string, scissors, a protractor, and a ruler I constructed different shape parachutes. I used a stopwatch to time each flight. I flew each parachute five times from 16 ft. 5 in. with a 2 oz. washer. Then changed to a 1 oz. nut and repeated. I recorded the data and averaged each shapes descent time with the different weights. I compared the different weight and shape averages. Results With the 2 ounce washer the triangle fell the fastest with an average of 1.56 seconds, followed by the rectangle with an average of 1.63 sec., the square at 1.86 sec., the hexagon at 2.29 sec., and the octagon at 2.56 sec. With the 1-ounce nut the results stayed pretty much the same. The triangle finished first with an average of 2.17 seconds., the rectangle was next at 2.46 sec., then the square at 2.75 sec., the octagon at 2.75 sec., and the hexagon at 2.94 sec. Conclusions/Discussion My hypothesis wasn't supported by my results. From this experiment I learned that for the same area, the more corners something has the slower its descent. Through my research I learned about the terminal velocity of an object, and that the weight and shape of an object affect its velocity. Therefore, if I were to further experiment on this project I would test at taller heights to be sure the parachutes had reached a terminal velocity.	
Summary Statement Does the shape of a parachute affect its descent rate?	
Help Received Ms. Brown with format. My mom and dad in building and testing. My dad some typing.	