



CALIFORNIA STATE SCIENCE FAIR 2013 PROJECT SUMMARY

Name(s) Monet G. Scullin	Project Number 33616
Project Title Paper Airplane and Flight Distance	
Objectives/Goals Abstract A paper airplane is a simple, yet fun and creative toy. After reading my brother's paper airplane book, I learned that there are a wide variety of paper airplane designs. While going through the different designs, I was curious to find which paper airplane design would fly farthest? I conducted a scientific experiment using 8 different designs of paper airplanes to see which design would fly farthest. My hypothesis was a plane with a wider wing span would fly farthest because a real airplane has wider wing span to fly a longer distance. Methods/Materials For my experiment, I used the 8.5 x 11 inches plain copy paper to make paper airplanes, made two original designs, and picked six designs from www.origami-kids.com . I conducted my experiment inside the gym to avoid the effects of wind. I used the electric launcher in the first part of my experiment and hand throw in the second part. I threw one type of planes ten times and measured the distance from the starting point to nose of the plane for each throw. I repeated this procedure for the rest of designs. Results My data contained outliers, so I decided to use median. This way, I could avoid influencing central tendency of my test results. Based on the median, Wide Fenix got the first place for using the electric launcher. The second was X-Glider; the third Original; the fourth Mouse; the fifth FF2; the sixth X-Hunter; the seventh Fly; the eighth Needle. For the hand throw, Original got the first place. The second was Wide Fenix; the third X-Hunter; the fourth Needle; the fifth Fly; the sixth X-Glider; the seventh FF2; the eighth Mouse. Conclusions/Discussion Since the results of launcher depended on the fold on the bottom of the planes, the hand throw was more reliable way to test my hypothesis. Therefore, I only use the results by hand for my conclusion. Overall, my test results did not support my hypothesis. The winner, the Original, did not have a wide wing span. The second place, Wide Fenix, did have a wide wing span, but the third and fourth place did not have a wide wing span. Therefore, a wider wing span was not a key factor for longer travel distant. For the future experiment, I will test the winner of this experiment (the Original) using different size of papers to see which paper size of papers would fly farther. This way, I can tell whether a wing span would affect a travel distance.	
Summary Statement This project is about the correlation between wingspan and flight distance of paper airplanes.	
Help Received Father showed me how to fold paper airplanes. He also helped to make my graphs. Parents and brother helped measure the flight distances and record the results.	