CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY

Name(s)

Emily Bell

Project Number

J0104

Project Title

Fin Shape's Effect on Altitude

Abstract

Objectives

The objective of my experiment is to explore the effects of fin shapes on the altitude a rocket achieves.

Methods

Rocket made with interchangeable fins/ Altimeter/Accelerometer /Launching Equipment / Fins. Launched rockets with different fin shapes and recorded the altitudes they achieved along with other statistics.

Results

Rockets were launched changing out the fins every time. Three trials were run to see how the rocket reacted to the different fin shapes. The fins with higher drag ended up going the highest out of all of them.

Conclusions

The fins with the highest drag ended up going the highest. This is because the higher drag fins helped the rocket stay in a straight path by reacting to induced drag the fastest; turning the rocket faster off of any divergence.

Summary Statement

I found that fins with higher drag increase the efficiency of a rocket.

Help Received

I required assistance in launching and retrieving rockets.