



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Nolan Hanson; Max Poveda; Robert Ramirez	Project Number J0110
Project Title How Does Rocket Design Affect the Distance of Flight of an Air Pressure Rocket?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this study is to determine the distance of flight, using air propulsion and different designs of rockets.</p> <p>Methods/Materials Bike pump, rocket launcher, various lengths of string, tape measure, PVC pipe, foam, styrofoam, cardboard, paper, wax leaves, cardstock.</p> <p>Results Three rockets were created with different materials and design, then launched using air propulsion, and the distance of each flight was recorded. Repeated trials were run to determine which rocket design flew the farthest consistently. This difference clearly showed how the material and design affected the distance of flight.</p> <p>Conclusions/Discussion Repeated trials with various rocket designs launched revealed clear differences in their aerodynamics. It is concluded that the design and the materials used to create rockets has a direct impact on the distance of flight.</p>	
Summary Statement We showed that a rocket's design has significant impact on it's aerodynamic capabilities.	
Help Received None. We designed, built, and performed the experiments ourselves.	