



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Samuel W. Adams	Project Number J0101
Project Title Need a Lift	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective was to see which had a greater effect on lift, the shape of an airplane wing or the weight of the airplane. I believe that the shape of the airplanes wing will have a greater effect on lift.</p> <p>Methods/Materials Materials and method: I used a wind tunnel, a small scale, to measure lift a bolt to secure the airfoil to the scale, three nuts to be screwed on to the bolt and used to add weight, tape to secure the flap on the airfoil in a position to change shape of the wing, and two paper towels as a flow straightener.</p> <p>Results Results: When I added weight to the airfoil, there was little effect in the lift generated. However, when I changed the flap position on the airfoil, there was a greater effect on lift.</p> <p>Conclusions/Discussion Discussion: I think that the U.S military is focusing on making new planes and aircraft light weight when they should be focusing on improving the wing design and plane shape. With new wing shape, we can make our aircraft invisible to radar possibly even make our aircraft completely quiet.</p> <p>Conclusion: The lift generated was effected more by the shape of the wing.</p>	
Summary Statement My project is about testing which had a greater effect on lift, the shape of the plane's wing or weight of the plane.	
Help Received Father helped to build the wind tunnel due to the use of a circular saw.	