



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Jeremy R. Hurst	Project Number J0113
Project Title In Pursuit of the Perfect Propeller	
Abstract Objectives/Goals This project is intended to find which propeller is most efficient for my 0.40 model airplane engine. Methods/Materials I took an O.S. engine max-.40 LA model airplane engine and mounted it to a board which was on linear ball bearings. The board was attached to springs to measure how much static thrust the engine and propeller generated. Results I tested each propeller three times, measuring the rotational speed of the propeller in RPM (rotations per minute), and the distance that the spring was stretched. The stretching of the spring gave me the static thrust. Conclusions/Discussion I found out that the bigger the propeller, the bigger bite it got out of the air, but that slowed down the engine, causing it to work harder and heat up making it less efficient. But the smaller the propeller the less bite out of the air and not making it work hard enough which was not very efficient either. So I found out that the middle of the sizes of the different propellers was most efficient for the model airplane engine. That was the 11x7 propeller.	
Summary Statement This project consists of testing different model airplane propellers on a model airplane engine.	
Help Received My Dad helped me over all, my Grandad helped me test the propellers, and my Grandmother helped me with the board	