



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Amanda M. LeQuire	Project Number S0608
Project Title Under Pressure	
Abstract Objectives/Goals The objective of my project was to find out whether or not the atmospheric pressure is higher or lower at a higher altitude. Methods/Materials Materials: one barometer, two balloons, one tape measurer, an airplane, and a pen and paper to record data. Procedure: 1. Blow up two balloons and set the barometer and altimeter to the correct pressure readings. 2. Measure and record the widths of the two balloons. Record the ground level pressure from the barometer, before take-off. (These measurements serve as the controls.) 3. For every one thousand feet (or 304.8 meters) above ground level the plane reaches, record the circumference of both balloons and the pressure reading from the barometer. Results In the first test, the pressure dropped 126 millibars. The pink balloon expanded a total of 3.81 centimeters and the purple balloon expanded 4.445 centimeters. In the second test the pressure dropped 119 millibars. The pink balloon expanded 3.175 centimeters, and the purple balloon expanded a total of 3.81 centimeters. These results show that the pressure was lower at the higher altitude in both tests. Conclusions/Discussion My hypothesis, which was that the pressure would be lower at higher altitudes, was correct. Both the balloons and the barometer showed that the pressure dropped steadily as the airplane flew higher.	
Summary Statement My project was about whether the atmospheric pressure was higher or lower at different altitudes, from 1000 to 9000 feet above sea level (304.8- 2743.2 meters).	
Help Received Father flew the plane.	