



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Alek J. Pronenko	Project Number J1428
Project Title Blood Rush	
Abstract	
Objectives/Goals The objective is to determine if caffeine effects the blood pressure of children.	
Methods/Materials Eight subjects ages 9-15 were used in the project. The blood pressure of each subject was taken with a stethoscope before drinking a Coca Cola, at which time, the systolic and diastolic measurements were recorded. Each subject drank a Coca Cola drink within a 10 minute period. The blood pressure of each subject was taken again then recorded 30 minutes after the Coca Cola drink had been consumed. The blood pressure was again taken 60 minutes after the Coca Cola drink had been consumed. To get an accurate reading and a results average, the process above was repeated again two more times on different days. Upon completion of the readings, the results were compared. The materials used were eight subjects, a stethoscope, a watch for timing and 24 -355 ml cans of Coca Cola with caffeine.	
Results On the first day and after the 30 minute reading, 5 subjects experienced decreasing blood pressure while 3 of the subjects experienced increased blood pressure. The 5 subjects who's blood pressures decreased, experienced increased blood pressure after 60 minutes. One of the 3 remaining subjects stayed the same while the other decreased. One of the subjects experienced a jump of 14 points in the systolic reading. On the second day, 3 subjects experienced increased blood pressure. 3 other subjects experienced decreasing blood pressure with the 2 remaining staying the same. After 60 minutes, 5 subjects were up, 2 stayed the same and 1 was down. On the third day after 30 minutes, 3 subjects were up, 3 were down and 2 stayed the same. After 60 minutes, 6 subjects were down and 2 were up. Most subjects experienced upward blood pressure readings on the 1st and 2nd days of testing. On the third day, most subjects experienced downward blood pressure readings.	
Summary Statement Measuring the effects of caffeine on the blood pressure of children.	
Help Received My Mom provided the 24 drinks and assisted me in taking the blood pressure of each subject. I timed each subject, and entered the data for each blood pressure reading. My Dad used the computer to take the raw data from each reading and create color graph charts for each reading, of each subject, for each day.	