



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Samuel T. Crossman	Project Number J1805
Project Title The Ups and Downs of Elevator Science	
Abstract Objectives/Goals The purpose of this experiment is to observe weight changes that occur while riding on an elevator. Methods/Materials I gathered three objects (an empty 2 liter soda bottle, an empty syrup bottle, and myself) and two scales. I measured the weight gain and loss of each object on an elevator. I repeated the experiment ten times for each object. I collected data for each try. I averaged the change in weight and calculated the percentage of weight change. I repeated this process on three elevators. Results When an elevator moves upwards at first you gain weight but your mass stays the same. When an elevator slows you lose weight. In the middle of an elevator's travel the scale returns to normal. Conclusions/Discussion I found that the percentage of weight change stays constant for each elevator. The Crown Plaza had 10.2% weight gain. The Double Tree had 6.7% weight gain. Hilton Gardens had a weight gain of 7.2%. I would guess that I would have similar results on any elevator. I would also conclude that the faster the elevator the more weight that you will gain.	
Summary Statement The purpose of this experiment is to observe weight changes that occur while riding on an elevator.	
Help Received My grandpa brought me to the hotels and video taped me. He also helped me with the computer program that did the calculations.	