



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Genevieve G. Mount	Project Number S1907
Project Title Aphid Populations and How They Relate to Plant Height, Parasites, and Predators	
Abstract Objectives/Goals The purpose of this project is to determine how the number of aphids on a plant affects the plant height, parasites and predators. I tested to see if aphid population increase would inversely affect the plant height. I also tested to see if aphid populations would positively affect the number of parasites and predators. Methods/Materials The plants used were pac choi, lettuce, chard, cabbage and broccoli. There were six plants of each type; they were randomly planted in two different boxes. One box was the control, when necessary I sprayed it with a simple soap spray to keep the aphids off. Twice every week I counted the number of leaves, measured plant height and counted the number of aphids, parasitized aphids and predators on each plant. Lepidopterous pests were removed by hand. Conclusions/Discussion Aphid populations affected the height of the plants; any population of aphids hindered the growth of the plants. I discovered an aphid population threshold level that attracted syrphid flies to lay their eggs in a colony of aphids. I found that there were no obvious threshold levels between the numbers of parasitized aphids and the aphid populations. The parasite and predator populations both peaked at the same time, right after the aphid populations peaked. This indicates both parasites and predators benefited from the peak in aphid population, and they both caused the aphid populations to plunge downward.	
Summary Statement Aphid populations and How They Relate to Plant Height, Parasites, and Predators	
Help Received Mr Koens helped with statistical analysis, my Father was my project advisor	