



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Diane L. Polyakov	Project Number S1718
Project Title Effect of Ultraviolet Light on Plant Production	
Abstract Objectives/Goals For my science fair project, I wanted to determine if Ultra-Violet (UV) light is harmful to plants. Specifically, I wanted to test whether reducing the amount of UV light that reaches a plant would result in an increase in the amount of fruit production by the plant. Methods/Materials To conduct my experiment, I decided to grow two sets of pea plants under similar conditions with the only difference being that one set of plants would receive UV light, while the second set would be shielded from UV light. Each set of pea plants grew under a separate piece of clear Plexiglas. However, one piece of Plexiglas was coated with a sheet of UV blocking film. I continually watered each set equally and measured the plant growth and development over a four month period. I removed the mature peas from the plants and measured them both for weight and size. Results The number of pea pods produced on the set receiving UV light was 85, while the set with UV light blocked only produced 58. The average size of a pea pod receiving UV light was 2.4 inches, and the average size of a pea pod with UV light blocked was 2.2 inches. Lastly, the average number of peas in a pod exposed to UV light was 5, while the average number of peas in a pod with UV light blocked was 4. Conclusions/Discussion I concluded that the UV blocking film not only blocked out 99% of all UV rays, but also blocked out some visible sunlight. Without the sunlight, the pea plants were unable to photosynthesize as quickly and produce as much fruit.	
Summary Statement The project tested whether the UV light, which is known to be harmful, would have a negative effect on pea plant food production.	
Help Received Father helped build structure holding Plexiglas shields.	