



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Aysia V. Howard	Project Number S0910
Project Title Crassula portulacea and Dendranthema morifolium Used as Bioremediation Devices	
Abstract Objectives/Goals The objective within my experiment was to determine if the Jade plant and the Chrysanthemum are efficient means of filtering the chemical Benzene from an enclosed, controlled environment under constrained environmental lighting conditions. Changing the amount of lighting that the plant was introduced to will help prove whether or not the jade plant, a CAM plant, is actively or passively doing photosynthesis. Methods/Materials To carry out this experiment, a strict setup was constructed within the lab of Cal State Channel Islands. Mason jars were prepared and overdramatically sealed to prevent the leakage of the chemical thus controlling the tests. Instrumentation, such as a Gas Chromatograph, was used to determine the area of the chemical present within 100uL of the injected gas. Results Based upon my tests, both plants are proficient in filtering benzene. For the chrysanthemum, light is a contribution in filtering the chemical. Without an adequate amount of light, the chrysanthemum did not filter more of the chemical. This indicates that maybe the chemical was being absorbed into the plant until it reached its saturation point. Unfortunately, at this point, the jade plant is still being tested without adequate light, but it is sure to be finished before the actual fair.	
Summary Statement This project is about the remedation of benzene with common office plants.	
Help Received Used lab equipment at Cal State Channel Islands; aided transportation to Cal State Channel Islands	