



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Alexandria P. Sharpe	Project Number S1721
Project Title Crassulacean Acid Metabolism Plants	
Abstract Objectives/Goals My goal is to prove that Crassulacean acid metabolism plants give off more humidity at night then at day. Methods/Materials Materials: Ten Jade plants, Four plastic boxes, XL zip lock bags, Hygrometer, Veriner oxygen probe, Vernier carbon dioxide probe, Laptop, Two heat lamps Results My results ened out great for both of my test . they both had more that a 5% significance. Conclusions/Discussion conclusion I support my hypothesis because it shows at least 5% significance. Humidity percentages shot up from an average of 68% to 90% in the dark and in the light the average was 60% to 77%. Also the oxygen levels shot up in the dark from an average of 72.7ppt to 167.2ppt and in the light the average of oxygen levels was 108.3ppt to 159.2ppt. Carbon dioxide levels also showed a steady average for the dark 4.78ppt to 4.305ppt and for the light a steady average too, 4.77ppt to 4.825ppt. There is an average of 22% difference of rise in humidity for the dark and 17% difference of rise in humidity in the light. Also for oxygen there is an average of 94.5ppt difference of rise in the dark and for the light there is only 50.9ppt difference on average. Carbon dioxide there was an average drop of .475ppt in the dark and for the light there was a rise of .055ppt. My second test worked out great too. The Jade plants that I first put into the light, then into the dark shot up in humidity, oxygen, and went down in carbon dioxide; which is very good. It shows that the Jade plants are doing photosynthesis in the dark. The other half of the Jade plants that stayed in the dark were able to do a little bit of photosynthesis but the carbon dioxide levels stayed leveled; which is good too because it shows even though Jade plants have no access to light they can still produce photosynthesis. I think that#s amazing. Unfortunately we unable to produce temperatures like the desert or any other arid place would, which probably would change the data significantly, that would have been very interesting to see.	
Summary Statement It show the different levles of humididty, carbon dioxide, and oxygen of CAM (crassulacean acid metabolism) plants.	
Help Received Used equipment at school under the supervision of Mr. Callway	