



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Andrew S. Benson	Project Number J0903
Project Title What's the Best Aspect for Intertidal Life?	
Abstract Objectives/Goals My objective was to learn whether or not the aspect of a rock or pier piling surface affected the abundance of algae, mussels, barnacles, limpets, etc. Methods/Materials I measured algal and animal abundance on all sides of five different rocks, and five different pier pilings, at the same intertidal height. A quadrat was used to obtain multiple measurements of abundance on north, south, east and west sides of rocks and pier pilings. Abundance ratings of 0-4 for animals, and a separate rating of 0-4 for algae, were averaged for each aspect. Results Algae grew most prominently on the south and west sides of rocks, and the south and east sides of pier pilings. There was a higher animal than algal abundance on the north side of rocks and pilings. There was much more animal growth on the pier pilings than there was algal growth. Conclusions/Discussion Algae and most intertidal organisms that live on rocks and pier pilings do not grow or live past a certain depth because of predation, food, and especially for algae, light. I believe that there was very little algae on the pier pilings because there is very little light and algae need light to photosynthesize. There was a lot of algal growth on the south side of both rocks and pier pilings because, in Santa Barbara the light is strongest from the south.	
Summary Statement I compared the abundance of intertidal life on different aspects of rocks and pier pilings .	
Help Received Dad helped carry out experiment; sister helped design board; mentor gave me reading material.	