



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Dane L. McFadden</b>	<b>Project Number</b> <b>J0921</b>
<b>Project Title</b> <b>The Effects of Harmful Bacteria on Ocean Plankton</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was to see if the amount of harmful bacteria in the ocean effects the plankton population. <b>Methods/Materials</b> To answer my purpose question I collected data in the field and used information published by an organization called Heal the Bay. This information gives weekly grades for several beaches in Ventura County, based on how much harmful bacteria is in the water. For a period of 6 weeks I took water samples from four beaches using a plankton net attached to the end of a 1.6m fiberglass pole. I counted the amount of plankton in each sample using a dissecting scope and then calculated the amount of plankton that would be in one cubic meter of water. I compared the grade from Heal the Bay with the calculated amount of plankton derived from the water samples. <b>Results</b> I found that the amount of harmful bacteria in the water does not seem to effect the plankton population. <b>Conclusions/Discussion</b> The amount of bacteria in the water does not seem to effect the plankton population. The information on my graphs shows no correlation between the amount of bacteria and the plankton population. I noticed large changes in the amount of plankton after unusually hot or cold weeks. Some ideas that have arisen, which I could study in the future, are the effects of the temperature and weather on plankton populations.	
<b>Summary Statement</b> Today, pollution is a big problem and some kinds of pollution put harmful bacteria into the ocean, and so I wanted to see if this kind of bacteria and the other pathogens indicated by their presence are harmful to plankton.	
<b>Help Received</b> My mother provided transportation; my father advised me on my project and provided transportation; Marilyn McFadden (my aunt and a marine biologist) gave advice on counting plankton.	