



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Raven S. Adams	Project Number 22274
Project Title Electricity's Effect on Algae	
Objectives/Goals This experiment was conducted to determine the effects the presence of an electromagnetic field has on algae. These effects relate to the real environment in situations where the presence of humans (such as in a power plant) causes an electromagnetic field to form. Abstract Methods/Materials An electromagnetic field was created using plant light bulbs and electrical wire. Three identical samples of algae were placed in test tubes held in a stand near the light bulbs. Wire wrapped around these tubes carried the force of the electromagnetic field to the samples. The number of coils around each tube created increasing amounts of exposure. Sample #2 was exposed the least with 1 coil, sample #3 had 3 coils, and sample #4 was exposed with 5 coils. The first sample served as the control and was placed in an isolated environment. After two hours of exposure, the samples of algae were observed to determine the effects of their exposure to an electromagnetic field. Results While the isolated sample of algae maintained its original status, the exposed samples were damaged by the presence of an electromagnetic field. The temperature rose in each sample, cells were destroyed, and the algae was reduced in weight. Conclusions/Discussion The electromagnetic field damaged the algae according to its amount of exposure. These results show the significant amount of damage that even a minimal electromagnetic field can have on algae.	
Summary Statement This project examines the effects of an electromagnetic field on algae.	
Help Received	