



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Olivia R. Jackson	Project Number 22001
Project Title Algal Affairs	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my experiment was to determine whether heat has an effect on the growth of algae. I hypothesized that warmer temperatures would cause more algae to grow in both freshwater and saltwater samples.</p> <p>Methods/Materials I did this by filling eight buckets with a liter of saltwater and eight with a liter of freshwater. Four freshwater and four saltwater buckets were placed inside on heating pads, and the rest were kept outside. Every day for seven days, I measured the temperature and the amount of algae in each bucket, and took photographs. To measure the amount of algae, I used a multimeter, a photo resistor, and a laser.</p> <p>Results I found that the highest growth rates occurred in warmer temperatures for freshwater algae and in colder temperatures for saltwater algae.</p> <p>Conclusions/Discussion My hypothesis was proven partially correct, algae in freshwater samples did grow more in a warmer environment. Saltwater algae, however, grew better in colder temperatures. One thing that could have caused this difference is the fact that lakes are constantly changing temperatures, so freshwater algae would be more adapted to varying temperatures. Oceans, though, because of their size, have almost the same temperature all of the time. Algae from this source wouldn't be as used to different temperatures.</p>	
Summary Statement My project is about the effects of temperature on algal growth rates in freshwater and saltwater samples.	
Help Received My dad, mom, or little brother held the flashlight for me each night, my dad drove me to get the water for the experiment, and I consulted George I. Matsumoto and Johnathon Friedman via telephone and e-mail.	