



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Natalya B. Dreszer	Project Number J0907
Project Title Algae to the Rescue! Bioremediation of Greenhouse Gasses with Algae	
Abstract Objectives/Goals Global Warming is one of the biggest problems in the world. In my experiment, I wanted to prove that algae would grow better with exhaust pumped in and the algae would clean up the CO ₂ from the exhaust. My hypothesis was #Pumping exhaust into water will make it more acidic. If algae grows in the same water, then it will make the water more basic. Algae will grow more in the conditions which get CO ₂ .# Methods/Materials I pumped natural gas heater exhaust into glasses filled with water and conditions. I compared pH between algae and no algae, and exhaust and no exhaust conditions. I ran the experiment for three weeks while measuring pH daily: before pumping in exhaust, after pumping in exhaust, and after a day of growth. Results My results clearly showed that after pumping exhaust into half of the conditions, their pH went down. The pH of the conditions without exhaust stayed the same. After each day of growth the pH went dramatically up, in the algae conditions that got exhaust. The pH of the algae conditions without exhaust went slowly up. The condition with exhaust but no algae barely rose after the day was out. These results were consistent throughout three weeks of measurements, but there were some interesting exceptions. My observations of algae growth between the conditions were unclear. Conclusions/Discussion My results supported my hypothesis. Algae can be used to clean up the CO ₂ made from burning fossil fuels. If algae can also be used to make bio-fuel, then algae can rescue us from global warming!	
Summary Statement My project is about using algae to decrease the amount of CO ₂ in exhaust from burning fossil fuels.	
Help Received My dad, Tim Dreszer, helped with graphs, set up, and taking data. He also distracted me and broke my pH meter. My science teacher, Bob Biegert, discussed and gave helpful suggestions. He also set deadlines that were helpful.	