



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Katherine J. Keller</b>	<b>Project Number</b> <b>J0510</b>
<b>Project Title</b> <b>Going Green</b>	
<b>Abstract</b> <b>Objectives/Goals</b> I took three fuels and determined which one produced the most amount of heat energy and could be considered an alternative fuel to gasoline. <b>Methods/Materials</b> The fuels were diesel fuel, vegetable oil and biodiesel fuel. I assembled a device which allowed me to record the amount of heat energy transferred to water by each fuel. I used the heat equation for calorimetry to figure out how much heat energy was released .The final amount was measured in joules. <b>Results</b> I found that there was a significant difference in the amount of joules produced by the three fuels. In fact, the most heat energy was produced was in vegetable oil. Biodiesel fuel came in second, followed by diesel fuel. <b>Conclusions/Discussion</b> Since I found that there is more heat energy produced by vegetable oil and biodiesel than diesel fuel, it supports the fact that there are viable forms of energy we can continue to research to use in our motor vehicles. There are ways to reduce our gasoline usage and Greener cars should be a goal of the future!	
<b>Summary Statement</b> I took three fuels and determined which one produced the most amount of heat energy .	
<b>Help Received</b> I would like to thank both of my parents for helping me purchase the materials I needed. I would like to thank KFC for supplying me with free vegetable oil from their French fries for my testing. I also appreciate the information given to me by the people at Pacific Biofuel, Inc, regarding the consistency of	