



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Louisa Vanhecke	Project Number J1121
Project Title Internal Global Combustion Warming Engine	
Abstract Objectives/Goals The purpose of my science project is to find out if the residual heat produced by the internal combustion engine of the car could be a major contributor to global warming. If this were to be true, should we as a nation and world find a more eco-friendly means of transportation, such as a hybrid car or better carpooling? Methods/Materials I have obtained the six most common kinds of cars on the road today, a large and midsize SUV, a sports car, a small sedan, a compact car, and a hybrid. These cars were driven for fifteen minutes on a designated loop and then parked in a controlled area to record the minimum and maximum temperature reached. This test was repeated three times for each vehicle. Once these temperatures were recorded, I found the differences, and calculated averages for each car and all the cars combined. Results The average temperature difference of all the cars combined was 4.1°F. I calculated the volume of the controlled test area and converted it into cubic kilometers so that I could relate it to the cubic kilometers of earth's atmosphere (4.2 billion cubic kilometers). I then devised two methods to find out how many "control areas" fit in earth's atmosphere to determine the percentage of the 4.1°F increase. Conclusions/Discussion The conclusion of my science project is that the residual heat given off by the car after fifteen minutes of driving hardly makes a difference to the atmosphere at all. However, I did come to a result in that even though the heat increase was minimal, it was still a recordable number.	
Summary Statement Does the residual heat produced by the internal combustion engine of a car contribute to global warming?	
Help Received My dad with the driving of the cars and recording data. My mom with display board layout and presentation. Daniel Huthsing (Friend and intern at FLIR Santa Barbara) with IR pictures.	