



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Alden J. Moir	Project Number J1715
Project Title What Is the Best Way to Reduce Fuel Use in Our Community?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this project was to determine how much gas could be saved in my community by having fuel-efficient cars, building shopping centers closer to home or providing an easy to use public transportation system.</p> <p>Methods/Materials A questionnaire was made and given to all the parents of sixth, seventh and eighth graders and all of the teachers at Quail Lake School (a rural k-8 school in Central California). The questionnaire asked respondents annual miles driven, the gas mileage of their cars, whether they would drive a less functional car that got better mileage, and how much more they would pay for a car that got significantly better mileage. It also asked whether they wanted to drive less, whether they would use public transportation if it was easy to use, and if respondents would use a shopping center built closer to their homes. Finally it asked what were the top three places people drove to.</p> <p>Results 96 questionnaires were distributed and 40 were returned completed. Respondents drove an average of 17,238 miles per year. Their average gas mileage was 21.1 MPG. About half the respondents would drive a less functional car that got better gas mileage and the average that people would pay for a similar car to theirs that got much better mileage was \$4,500. 92% of people would like to drive less, but only 40% of respondents would ride an easy to use public transportation system. 92% of respondents would use a shopping center closer to home, but shopping was the second most frequent destination (26%) behind work (31%).</p> <p>Conclusions/Discussion My conclusion was that improving the fuel efficiency of cars was the best way to reduce fuel use in my community. People were willing to pay a good deal more for more fuel efficient cars, and my background research showed that this amount could improve economy by as much as 70%. Most people were not willing to use public transportation, and moving shopping closer to home had less impact because it was not the place people drove to the most.</p>	
Summary Statement My project is about how to reduce fuel use the most by understanding the preferences and needs of drivers in my community.	
Help Received My father helped find background research for this study. My mother helped mount graphs and research paper on presentation board.	