



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Hannah B. Sarver</b>	<b>Project Number</b> <b>S0317</b>
<b>Project Title</b> <b>Can I Get a Ride? An Analysis of Carpooling</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To determine the efficiency of automobile use in the area surrounding Carlmont High School, based on length, distance, and consolidation of trips, frequent times of day for car use, and passengers carried.</p> <p><b>Methods/Materials</b> Create form to track family car use over two weeks. Collect data (39 families, 68 cars, 3700 trips), and enter into Excel spreadsheet, showing total miles driven, total time spent, and passenger-miles driven. Find sums and averages of all categories tallied. Sort data by time of day, distance and length of trip, and passengers carried. Graph, with percentages of total trips by length in miles, average passengers driven per mile, and most congested times of day. Analyze data regarding consolidation of tasks away from home and frequency of carpooling to assess driving efficiency.</p> <p><b>Results</b> Consolidation of errands: 93% of cars at least twice in two week period, 19% at least half of all trips Carpooling outside of family: 56% of cars at least once, 29% at least 3 times in two weeks Average passengers per mile per driver: approximately 0.72 Distance of trips: 69% of all trips were less than 5 miles, with 60% of these under 3 miles Average weekday most congestion 7:00-8:00 am, weekend higher frequency 1:00-2:00 pm.</p> <p><b>Conclusions/Discussion</b> Those surveyed seemed to consolidate errands, utilize public transportation (as indicated by comments), and carpool when possible. However, many areas of driving efficiency could be improved, as evidenced by frequent trips within a short distance of the home and a majority of regular commutes driven with no passengers and at the most congested times of day.</p>	
<b>Summary Statement</b> This project aims to analyze the efficiency of car use in a given population by collecting and assessing data based on distance and timing of trips, consolidation of errands, and passengers carried.	
<b>Help Received</b> Mother assisted in data entry and use of Microsoft Excel.	