



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> Cody D. Preis	<b>Project Number</b> <b>J0218</b>
<b>Project Title</b> <b>Comparing the Effects of Vaporized Gasoline to Liquid Gasoline in an Engine</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My objective is to determine if a four-cylinder engine will run efficiently off of vaporized gasoline rather than liquid gasoline.</p> <p><b>Methods/Materials</b> Using a four-cylinder engine, I connected a hose from the carburetor to a sealed canister which contained one quart of liquid gasoline. From the sealed lid on the canister, I also ran a 2 ½ inch pipe down to the bottom of the canister which allowed air to come in and create fumes by bubbling the fuel. The airflow of the fumes was controlled by a valve and the airflow for the fresh air was also controlled by a separate valve on the hose going to the carburetor. By regulating these valves, I was able to start the engine and run it on fumes to conduct my experiment. I ran a total of 30 tests, 15 for liquid gasoline and 15 for vaporized gas. Gauges to monitor water temperature and oil pressure were also used.</p> <p><b>Results</b> Liquid gasoline ran for an average time of 28 minutes and 8 seconds. Vaporized gasoline ran for an average of 88 minutes and 20 seconds.</p> <p><b>Conclusions/Discussion</b> After completing my tests, I have found that my hypothesis for the engine was correct. My hypothesis stated that the engine changed to run off of vaporized gasoline will run longer than the engine unchanged to run on liquid gasoline. This data led me to the conclusion that vaporized gasoline can be a much more fuel efficient way to run an engine. It also seemed much easier to do then using an alternate fuel source. You never know, this could be the future of automobiles.</p>	
<b>Summary Statement</b> Comparing the Effects of Vaporized Gasoline to Liquid Gasoline in an Engine	
<b>Help Received</b> Father helped supervise testing; Mother helped submit this application.	