



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

<b>Name(s)</b> Grace Chen; Carissa Lee	<b>Project Number</b> <b>J1804</b>
<b>Project Title</b> <b>Fat Fries?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To find out which fast food chain store's French fries contains the greatest amount of calories.</p> <p><b>Methods/Materials</b> Methods: First, we constructed our calorimeter. Then we weighed each of the French fries in grams and recorded its weight. After, we filled the glass beaker half full with distilled water (approximately 100 mL), and measured the temperature of the water. We then impaled a French fry on the needle and lighted it on fire. Immediately after it caught on fire, we quickly placed the clay base with the impaled French fry under the beaker. We allowed the food item to burn itself out before using the pliers to push the French fry onto a plate. Then we stirred the water and measured the final temperature. Then we measured the remains of the burned French fry in grams on the scale. We repeated these steps for all of the French fries that had come from different fast food chain stores, and recorded detailed measurements. We performed these steps on three French fries from each fast food chain store, to ensure our precision.</p> <p>Materials: For our materials, we used a homemade calorimeter, which required one glass beaker, clay base, a needle, and pliers. Our experiment also required French fries from the following fast food chain stores: McDonald's, Jack-in-the-Box, Wendy's, In-N-Out Burger, Carl's Jr., and Burger King. Other materials that our experiment required were: a graduated cylinder, distilled water, a Celsius thermometer (with a 20-100 range or greater), safety glasses, a lighter, and a scale (to measure in grams).</p> <p><b>Results</b> Based on our calculations, Jack-in-the-Box's French fries contained the greatest amount of calories. Carl's Jr.'s French fries had the least amount of calories. However, our results differed slightly compared to the results of the manufacturing companies because of a few uncontrollable circumstances such as wind and heating of the beaker from the lighter.</p> <p><b>Conclusions/Discussion</b> According to the data that we collected from our experiment, our results agreed with our hypothesis that Jack-in-the-Box's French fries contained the most calories. Unfortunately, we had some uncontrollable circumstances that affected the outcome of our results and how accurate our results were. Overall, our experiment concluded that out of selected fast food chain stores, Jack-in-the-Box's fries contained the greatest amount of calories.</p>	
<b>Summary Statement</b> To find out which fast food chain store's French fries contains the greatest amount of calories.	
<b>Help Received</b> Father supervised experimental procedures. Parents purchased fries.	