



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jenna W. Long</b>	<b>Project Number</b> <b>J0515</b>
<b>Project Title</b> <b>Burn Baby Burn</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was to find out which of the seven foods i used released the most heat and food energy/food calories. Also how much of it burned and how long it burned. My hypothesis was that the walnut would come out on top because it had the highest calories per gram on the FDA label. Also that meant it had fuel and for such a small nut it would have to be mostly fuel meaning most of it would burn. And those factors contribute to the final equation to food calories per gram. <b>Methods/Materials</b> First you would need to make your calorimeter with the cardboard, tinfoil, rubberband, paperclip, clay, beaker, thermometer, and the water. Then you would place the food(previously weighed)on the paperclip. Then light the food, take the tome of it's burning, then immediately after take the water and stir it using the thermometer, and record its temperature. The find the temperature change. Also you would need to take the weight of the residue and find how many grams burnt. You would then insert that into the following equation: gram calories= mass of water X specific heat X temperature change and to find food calories divide gram calories by a thousand. Then for food calories per gram divide food calories by grams burnt. <b>Results</b> It came out that the almond was at the top overall. Yet, the walnut was at the top or near the top in the rest of the elements. This must be because thought the walnut was high in others. The almond was still near the top but it must have had a better ratio between the elements that contributed into the final eqautions. <b>Conclusions/Discussion</b> My hypothesis was both correct and incorrect. Correct because the walnut was on the top or near the top during most of the elements. But incorrect because in the overall and most important the almond came out on top with most food calories per gram. So my conclusion would be that of my seven nuts over all the almond released the most food calories per gram. Yet, the walnut was near the top in rest of the elements.	
<b>Summary Statement</b> My project is about the calories in the foods that we eat , and a new hands on way to measure them.	
<b>Help Received</b> Father supervised my flame and helped with timing, mother helped correct my spellinng, Mrs. Marvin lent me her scale for use.	