



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

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| <b>Name(s)</b><br><b>Christine E. Herrmann</b>   | <b>Project Number</b><br><b>J1913</b> |
| <b>Project Title</b><br><b>It's "Counter" Intuitive! A Study of the Effectiveness of Different Kitchen Countertop Surfaces</b>   |                                       |
| <p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b><br/>The purpose of my science fair project is to determine the most functional kitchen countertop surface based on durability, stain resistance, and cost.</p> <p><b>Methods/Materials</b><br/>I selected several countertop materials to test and found samples of each. Next I developed tests to determine the functionality of each countertop, including durability and stain tests. For durability I dragged a weighted knife, dropped a soup can from a constant height, and held a direct flame to each sample (a test I eliminated, given no variation in the results). To test for stains I drew on each sample with a Sharpie, crayon, marker, and pencil. I also placed a drop of food stains on each sample for an hour before wiping them with a damp sponge. I then entered all of my observations into an Excel database, converting my qualitative notes to numbers.</p> <p><b>Results</b><br/>Most kitchen countertops are very effective these days. All are durable and heat resistant, and most are also stain resistant. For the budget-conscious person, Formica would be their best bet. Next ceramic or porcelain tile would be best. The natural stones were the least functional and durable. My project did not consider aesthetic value, which may influence a consumer's decision in spite of my analyses.</p> <p><b>Conclusions/Discussion</b><br/>The results of my experiments were counter intuitive. My hypotheses were very incorrect. I had expected the black granite to be among the top countertops, yet it ended up among the bottom six of the samples I tested! Even more surprising was how well Formica did. I thought that my three Formica samples would be at the very bottom, but they actually took the top three places. In completing my project I was especially surprised to find that it is virtually impossible to light any countertops on fire. Even with a direct flame, I could not get Formica to burn, which shows that over the years, man-made surfaces like Formica have improved dramatically.</p> |                                       |
| <b>Summary Statement</b><br>My science fair project tested the functionality of different kitchen countertop surfaces based on durability, stain resistance, and cost.   |                                       |
| <b>Help Received</b><br>Mother helped collect countertop samples;  |                                       |