

CALIFORNIA STATE SCIENCE FAIR 2009 PROJECT SUMMARY

Name(s)

Elexis S. Padron

Project Number

J1523

Project Title

Investigating the Heat Resistance Level of Different Types of Countertop Materials

Abstract

Objectives/Goals

My objective was to determine which countertops are best at taking extreme heat

Methods/Materials

Obtained 12 X 12 inch slabs of common counter top materials: granite, wood, laminate, and ceramic. Exposed one section of material to heat from a blowtorch for time intervals of 30 seconds, 60 seconds, 90 seconds, and 120 seconds. I then took the temperature in degrees Celsius of the side of the material NOT directly exposed to heat. Recorded and compared the data along with any other observations of damage to material.

Results

Hardwood counter tops have the least amount of heat transfer, but the most visible damage. Granite came in a close second for heat transfer, but had very little visible damage. Ceramic was the worst; it completely shattered at about 75 seconds.

Conclusions/Discussion

My conclusion is that granite and hardwood counter tops are the best materials to use in new homes; they take heat very well.

Summary Statement

My project's purpose is to see which countertops are most appropriate for certain housing conditions and to examine how well they take extreme heat.

Help Received

Father helped with blowtorch; Mother helped put the board together (cutting and glueing straight)