CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY

Name(s)
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Project Number
J0529

Project Title
How Efficient Is Your Fireplace Fuel?

Abstract

Objectives/Goals
For my science project I wanted to determine which fireplace fuels work most efficiantly to heat a room for the least amount of time, energy, and money.

Methods/Materials
For my experiment I used three fuels: nautral gas, presto logs, and firewood. I then weighed each fuel and I burned them individually in a pie tin underneath a coffee can which sat on a metal grate. Inside the can was one cup of room temperature water. Next, I timed how long it took each fuel to boil the water to 100 degrees celcius. Finally, I smothered the fuels and weighed them again to see how much grams of fuel it took to boil the water.

Results
From my experiment it turned out natural gas was the most efficient, followed by presto logs, and then firewood. Yet firewood was the cheapest, followed by presto logs, and natural gas which was the most expensive.

Conclusions/Discussion
It turned out that natural gas was the most efficient fuel because it has the most complete combustion out of all three fuels, and has no leftover residues so it burns pure. I also discoverd that the more efficient a fuel got, the more expensive it became.

Summary Statement
The purpose of my project was to find the most efficient fireplace fuel to heat a room for the least amount of time, money, and energy.

Help Received
Dad helped with experiment and Dennis Scarla helped with research.