CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY

Name(s)
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Project Number
J0502

Project Title
Corrosion and Conductivity

Abstract

Objectives/Goals
In this science project, I attempted to test which substances among air, salt, Clorox, water, or baking soda, rust a nail quicker.

Methods/Materials
I did three experiments and evaluated the results through three different methods that include observation and flow of electricity through the substance.

Results
The results of my experiments proved that my hypothesis was correct. The iron nail in Clorox rusted the most and the iron nail in the water with baking soda and air didn#t rust at all. By using corrosion meter (flow of electricity), the order of which substance rusted the nail the most is: Clorox, water with salt, water and water with oil, water with baking soda, and the empty glass.

Conclusions/Discussion
My project was interesting and I learned a great deal about corrosion, its causes, the effect of various substances I tested on corrosion, and how to prevent it. Three things I will do different if I did my project again is that I will get pure copper, test the resistance, and take out all the noise (electricity in the air). A problem I encountered was that when I was testing the current, the numbers were unstable. The variables were the substances I used in my experiments such as Clorox, water with baking soda, water with salt, empty glass, and water with oil. My suggestion is that if you have to put iron in water, galvanize it.

Summary Statement
The effect of substances such as air, salt, Clorox, water, or baking soda rust a nail quicker as evaluated through observation and the flow of electricity.

Help Received
Father advise report; Mother advise project board.