



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Patrick T. Burns	Project Number J1106
Project Title Rust Busters	
Abstract Objectives/Goals My dogs have chewed through the fence in our yard and we need a new fence that is durable and rust resistant. My project was to determine which metal would be most rust resistant out of steel, zinc, copper and aluminum and would make a good fence material that my dogs could not chew through. Methods/Materials I prepared four test tubes with tap water and four tubes with salt water. I cut eight lengths of wire, two of each type, zinc, copper, steel and aluminum. I prepared two pencils by wrapping one type of each wire so that four wires would hang from each pencil. I placed one pencil so the four wires hung into the tap water and one pencil so that the four wires hung into the salt water. I observed the changes in the wires over ten days. I recorded the changes on an observation log that I made. I created a measurement scale and assigned a scale value to each observation so that I could graph my results. Results I found that the aluminum wire showed no changes over the ten-day period in tap water and only a slight change in salt water. The other wires all showed signs of rust during the ten-day period in both salt and tap water. Conclusions/Discussion After my experiment, I found that aluminum was most rust resistant metal in both salt and tap water. It would be the best choice of material for a fence for my dogs.	
Summary Statement My project is about finding the most rust resistant metal for a fence.	
Help Received I received typing help on the report. All other typing was done by me.	