**Name(s)**
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**Project Number**
J1106

**Project Title**
Rust Busters

**Abstract**
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.

**Objectives/Goals**

**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.