



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Aurora L. Ostrom	Project Number S0510
Project Title The Effect of Lacquer on Corrosion Prevention	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals This project determined if lacquer, clear fingernail polish, prevents corrosion or reduces the rate of corrosion on copper, iron, aluminum, and steel.</p> <p>Methods/Materials Four samples of each metal were obtained. Two were coated with clear fingernail polish and the other two were left uncoated. The weights of all metals samples were then measured. A coated and uncoated sample were each placed in solutions of salt water and tap water. Weekly, the samples were reweighed and observations were recorded.</p> <p>Results The rate of corrosion was determined by a change in the weight of the sample, due to oxidation of the metal, over time. A comparison of these rates as well as visual comparisons were made between the coated and uncoated samples for each metal in both solutions.</p> <p>Conclusions/Discussion When compared to the uncoated metals, the lacquer coating was good at preventing corrosion in all the samples and was shown to significantly inhibit corrosion of the iron and copper samples.</p>	
Summary Statement This project determines the effect of lacquer, clear fingernail polish, on the rates of corrosion of copper, iron, aluminum, and steel in salt water and tap water.	
Help Received Used balance at Naval Air Weapons Station, China Lake. Father supervised use of balance and project. Mother helped with the display board.	