



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Courtney A. Sluder	Project Number J1225
Project Title Must There Be Rust?	
Abstract Objectives/Goals The problem trying to be solved is whether or not antibacterial affects the rust on iron nails. I think the nails with the different amounts of antibacterial will rust slower and less, for in my research I came to find that bacteria could help cause rust. To solve this problem I will place cups of water with antibacterial to see if it rusts less. Methods/Materials In my research I also learned all about bacteria, rust, and iron. Rust can form anywhere where there is iron, water, and oxygen. Bacteria can create rust and deteriorate metals. Iron is a very common element that is found all throughout our solar system, from Earth to the stars, and even the sun. Also, rust is found a lot too. It can cause much harm to cars and framing. Luckily these days though there are ways to prevent and get rid of formations of this substance. I tested by placing 50 nails in 50 cups of water, with 4 different groups. There were different concentrations of Dawn soap, antibacterial soap, and rubbing alcohol. I then had 10 people rate a single nail from each group. The results were the nails with antibacterial had much less rust. Results Antibacterial does slow the rusting process of iron nails for there was almost none with the antibacterial soap and covered in rust in the plain water. The rating of the nails in antibacterial soap and water were rated a lot lower then those in just plain water. Conclusions/Discussion Because rust is caused by bacteria, without it the rust is a lot less.	
Summary Statement My project was to test whether or not antibacterial slows the rust on iron, to prove that bacteria is a cause of rust.	
Help Received Dad got all my materials and helped me set everything up; Ms. Buchanan helped me go in a better direction for my project.	