# CALIFORNIA STATE SCIENCE FAIR
## 2002 PROJECT SUMMARY

**Name(s)**
Marissa L. Torres

**Project Number**
**J0523**

**Project Title**
## Bio-Rusting

**Abstract**

**Objectives/Goals**
In my science fair project I was trying to figure out wether or not the prensence of bacteria affects the speed in which a nail rusts in a jar of water? And does its environment affect the speed also

**Methods/Materials**
I got four glass jars and filled them with purified water. In two of the jars I put bleach in the water to kill all the bacteria. Then I took sand paper and cleaned the nails to take any oil coatings off. Next in the last two jars I put a pinch of dirt from the ground into them. I then placed one nail into eah jar. Then I placed one of each jars in the sun and shade, then checked them every twenty minutes for onr hour.

**Results**
I found out that that jar that was placed in the sun and that had bacteria in the water rusted the fastest out of all the nails. The nail that was in the sun without bacteria in the water rusted the secound fastest, then came the the jar that was placed with bacteria in the water into the shade than the other jar that also was in the shade.

**Conclusions/Discussion**
I conclude that bacteria and its environment dose speed up corrosion. I think this because of the amount of micro organisms that live in bacteria multiply when they heat up which causes things to grow faster, not to mention the amount of oxygen that is made from the sun and the organisms.

**Summary Statement**
Finding out if bacteria affects the speed of a nail rusting in water, and if its environment affects it also.

**Help Received**
Mom helped me correct all spelling and grammer punctuations; Dad helped me run my experiment; Mrs.Dunn gave ideas on how to improve my project; Uncle Tom helped me improve my project and how to get more scientific and more data