



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Ivan G. Hodges	Project Number J1314
Project Title Determining Which Area of a Local Playplace Has the Most Bacteria	
Abstract Objectives/Goals I wanted to find out if a local playplace (a fast food restaurant's) had bacteria present on the play apparatus. I know that the playplace appears to be clean, but I've never seen anybody clean it up inside, or outside the structure. I didn't know if there were any codes/laws that say how often or how much cleaning is required in these structures. I figured that if no law said that they had to clean it, then they probably weren't cleaning it up very often, if at all. Methods/Materials I collected samples/cultures from three different places on the play structure. I collected them with a sterile cotton swab (Q-tip). I then S-Streaked an agar treated petri dish with the swab. I labeled the dishes, and put them into an incubator for 48 hours. I collected cultures five different times. I also cleaned the test areas after my testing each time, and collected a culture after cleaning to see if the cleaning stopped the culture's development. I put 10% bleach solution in each petri dish, and sealed it before I discarded it. Results I found out that the cleaning method I'd chosen (alcohol wipes) did a great job in cleaning up almost all the bacteria. I also discovered that the tall slide had more bacteria than the small slide, and the rail. The main thing I found out was, that the restaurant did not clean the playplace, and that bacteria was "breeding" uncontrollably on the play structure. Conclusions/Discussion I was able to find out everything I'd hope to discover. I wasn't surprised by my results, but I'd bet that the public would like to know what I learned. I'm certain the restaurant would quickly change their uncaring attitude toward the play structure. It's hard to believe with everything we know about bacteria today, that there aren't rules/codes/guidelines about these playplaces, and the cleaning necessary to make them safe.	
Summary Statement Discovering how clean a playplace at a local restaurant is kept	
Help Received Advisor and his wife helped with typing and assembling my display board/databook	