CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY

Name(s)
Olivia D. Partone

Project Number
J2119

Project Title
Bacteria: Don't Love It, but Leave It!

Abstract

Objectives/Goals
The objective is to determine which cleaner I should use to clean my bathroom based on which would kill the most bacteria.

Methods/Materials
The materials included: petri dishes, agar (a gelatinous material derived from seaweed), sterial swabs, blotting paper and household cleaners.

The petri dishes were prepared with agar to make an environment for bacteria growth. The sterile swabs were used to collect bacteria samples from various surfaces in my bathroom. The bacteria was left in the prepared dishes to allow the bacteria to multiply. Three household cleaners were sprayed onto the blotting papers, which made them sensitivity squares. The squares were placed on the different bacteria colonies to see which reduced the most bacteria and prevented growth most effectively.

Results
Cleaners with alcohol actually helped the bacteria to grow. An overuse of cleaners and disinfectants can actually inhibit our ability to develop anti-bodies to the most harmful bacteria. While all the household cleaners reduced the size of their respective bacteria colonies, only one reduced the bacteria in the whole dish.

Conclusions/Discussion
The results helped me to decide on one cleaner, Lysol All-Purpose with Belach, as the best to use on my bathroom. The results proved my hypothesis that a good cleaner would significantly reduce the bacteria present. My project was about the best way to kill bathroom bacteria, but showed me how to life peacefully with non-harmful bacteria and kill only the harmful germs lurking.

Summary Statement
My project is meant to identify the best household cleaner to reduce the bacteria in my bathroom.

Help Received
My mother helped me take pictures and use the computer for research. My dad helped me handle the chemicals.