



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Phillip M. Brockett</b>	<b>Project Number</b> <b>J1304</b>
<b>Project Title</b> <b>How Effective Is the School's Disinfectant During the Day?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this project is to find out how long the school's disinfectant lasts on interior and exterior door handles during the day.</p> <p><b>Methods/Materials</b> Using the school's disinfectant, disinfect ten door handles outside of the school building and ten door handles on the inside of the building. Swab the door handle with a cotton swab after disinfecting the door handle. Use a different cotton swab for each door. Next, take a cotton swab and swab a labeled petri dish to transfer bacteria. Place petri dishes in the incubator. Repeat swabbing door handles every two hours for the remainder of the day. Wait 24 hours, and then count how many colonies of bacteria there is on each petri dish and write results.</p> <p><b>Results</b> Door handles 3, 6, 7, 9, and 10 had no bacteria colonies growing on them in the beginning of the day after cleaning them. The rest of the door handles had 2-4 colonies of bacteria growing on them. At the end of the day each door handle had bacteria growing on it. Each door handle had 20-50 colonies of bacteria growing on it at the end of the day. This is because more people touched the door handles and the bacteria had more time to multiply.</p> <p><b>Conclusions/Discussion</b> The door handles had more bacteria on them at the end of the day because each door was touched and had bacteria transferred to it during the day. As the day went on, more people were able to touch the door handles and the bacteria was able to multiply and reproduce. The disinfectant was more effective right after using it on the door handles, but became less effective as the day went on.</p>	
<b>Summary Statement</b> This project is about finding how long and how effective the school's disinfectant is against bacteria.	
<b>Help Received</b> School provided the disinfectant and the door handles.	