



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> Ariej B. Alkowni	<b>Project Number</b>  31247
<b>Project Title</b> Would You Like Some Bacteria with That? Which Area in a Restaurant Contains the Most Bacteria?	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The project "Would you like Some Bacteria with That?", was developed by testing a whole restaurant to see which area contains the most bacteria. The main goal of this project is to make restaurants better for their customers' health.</p> <p><b>Methods/Materials</b></p> <ol style="list-style-type: none"><li>1. Gloves</li><li>2. Cotton swabs</li><li>3. TSA plates</li><li>4. Incubator</li><li>5. Tape</li><li>6. Refrigerator</li><li>7. Local restaurant</li></ol> <p><b>Results</b></p> <p>Several areas of the restaurant were tested for bacteria. Among the category of doors, the main door had the most bacteria. After that came the inside bathroom handle, then the outside bathroom handle. In the second procedures of tables and chairs, the table chair had the most bacteria, followed by the table surface, and then the high chair. Of the dishes and utensils in the third procedure, the teacups had the most bacteria. Then came the plates, bowls, eating utensils, and the drinking glass. For the fourth procedure which tested random accessories, it was found that the most bacteria was on the pepper shaker, followed by the menu, salt shaker, soy sauce bottle, and lastly the signature pen. In the bathroom, the last area tested, the toilet seat had the most bacteria. This was followed by the faucet handle, toilet flusher, and then the soap dispenser.</p> <p>Out of all these areas combined, the the toilet seat had the most bacteria overall.</p> <p><b>Conclusions/Discussion</b></p> <p>The hypothesis that in a restaurant, the high chair and then the toilet seat will have the most bacteria was proven incorrect. In the end, the toilet seat, then a regular chair contained the most bacteria. Therefore, restaurant owners should pay extra attention to cleaning these areas. They could have more shifts for cleaning the bathrooms and have employees wipe the table chairs with disinfecting wipes after each customer.</p>	
<b>Summary Statement</b> The project "Would you like Some Bacteria with That?", was developed by testing a whole restaurant to see which area contains the most bacteria. The main goal of this project is to make restaurants better for their customers' health.	
<b>Help Received</b> Sister took me to the restaurant for the bacteria samples; Used local restaurant for bacteria samples; Used lab equipment at school under the supervision of Mrs. Arwa Alkhawaja.	