



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Kelsey A. McDonald	Project Number J1425
Project Title Bacteria: Is Your Toilet Cleaner than Some Public Places?	
Abstract	
Objectives/Goals To determine if the surfaces of some common public places, in which we all live, harbor a greater bacteria count than a common toilet.	
Methods/Materials Using 5 public surfaces (a shopping cart handle, an ATM button, an escalator, a door handle, and a toilet), I sampled each surface by swabbing the samples onto nutrient agar in petri dishes. After 10 days in an incubator, I measured the amount of bacteria grown in each petri dish, while keeping 1 petri dish swabbed only with sterile water, as a control.	
Results In my experiment, the shopping cart handle grew the most bacteria colonies with a count of 450 bacterias, the door handle grew 72 bacteria colonies, the ATM button grew 54 bacteria colonies, the escalator handle grew 36 bacteria colonies, while the toilet sample grew only 18 bacteria colonies.	
Conclusions/Discussion I concluded that the toilet sampled was the cleanest surface of all sampled, while the grocery cart handle was by far the most contaminated. This conclusion supports my original hypothesis. While it is a commonly held belief that toilets are very dirty, it turns out that ordinary public places we visit everyday could be more harmful to our health. My experiment leads me to believe that we need to be vigilant about washing our hands and food products in order to lessen a negative impact on ourselves and our society.	
Summary Statement My project is about measuring the amount of bacteria we encounter everyday, and comparing these amounts to the cleanliness of a toilet.	
Help Received Mr. Carlson lent me the incubator, my Mother purchased some supplies.	