



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Emily R. Sinsky</b>	<b>Project Number</b> <b>J2018</b>
<b>Project Title</b> <b>How Effective Are Automatic Soap Dispensers?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My project goal is to test my hypothesis, which states that automatic soap dispensers and manual soap pumps are equally effective against bacteria since you wash your hands immediately after using either one.</p> <p><b>Methods/Materials</b> In order to test my hypothesis, I inoculated my hands and washed them, using a manual soap dispenser, swabbed my hands and then repeated the process, only this time using an automatic soap dispenser. My hands were then cultured and I counted the bacterial colonies. I tested ten sites, varying from gas station restrooms to my own kitchen sink.</p> <p><b>Results</b> My results did not support my hypothesis. I found that automatic soap dispensers are actually 31% more effective than manual soap pumps, so they are most likely a better choice to keep your hands clean.</p> <p><b>Conclusions/Discussion</b> My project results were very surprising, because I also determined that there were not many bacterial colonies on the soap pumps themselves, so I wouldn't expect it to make a difference, just because I touched them. If I were to continue this project, I would increase the number of sites, especially in different locations, as well as see if the volume of soap dispensed from automatic soap pumps makes a difference, but so far, spending extra money on an automatic soap dispenser would most likely be worth it. My project results will be helpful to those working in schools, restaurants and hospitals, or wherever there may be an abundance of germs.</p>	
<b>Summary Statement</b> I compared the effectiveness of automatic verses manual soap dispensers.	
<b>Help Received</b> My dad helped me obtain the cultures and drove me to test sites. Dr. McClay supplied petri dishes.	