



**CALIFORNIA STATE SCIENCE FAIR  
2013 PROJECT SUMMARY**

<b>Name(s)</b> <b>Emerson R. Perez</b>	<b>Project Number</b> <b>J1016</b>
<b>Project Title</b> <b>Testing Different Materials That Inhibit the Passage of Airborne Contaminants</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My objective was to test what materials would best inhibit the passage of airborne contaminants.</p> <p><b>Methods/Materials</b> The materials I used were: 100 copies of 10x10 cm grids, cotton, polyester, Kirkland Brand paper towels, 3-ply toilet paper, kleenex, and Pam cooking spray. Each of the 100 grids was taped on an upright surface with the 5 different materials taped to each grid. The Pam cooking spray was held 13 inches away and sprayed for 5 seconds. I waited 10 seconds for the spray to penetrate the material. I counted the number of boxes that were totally covered or partially covered with spray and determined the percentage of spray coverage. (For example, if 62 of the boxes were covered, then 62% of the grid was covered with spray. I counted partially covered boxes to make wholes.)</p> <p><b>Results</b> The results showed that the cotton was the best material for inhibiting the passage of spray. The polyester was the worst material for inhibiting the passage of spray.</p> <p><b>Conclusions/Discussion</b> I concluded that the cotton was the best material for blocking the passage of airborne contaminants. This is important to know, especially if you work in the health care industry or if you just want to stay well during the cold or flu season. If you know this information you can choose to use cotton masks to stop yourself or people around you from getting sick from airborne contaminants.</p>	
<b>Summary Statement</b> My project is about discovering what material would be best to use to block any airborne contaminants from getting people sick.	
<b>Help Received</b> My mother helped to proofread my typing.	