



# CALIFORNIA STATE SCIENCE FAIR 2005 PROJECT SUMMARY

<b>Name(s)</b> <b>Ross P. Vittetoe</b>	<b>Project Number</b> <b>J1438</b>
<b>Project Title</b> <b>It's Only Water, Right?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The hypothesis of this science fair project is that when four leading brands of bottled water are blind taste-tested by 100 random people, the brand with the least chemical content will be preferred by the majority of the participants. The goal of this experiment is to see if the natural state, addition of or the removal of chemical ingredients in bottled waters will influence the taste preferences,</p> <p><b>Methods/Materials</b> The four brands of bottled water taste-tested were Dasani, evian, Arrowhead and Crystal Geyser. A table was set up with the labels of the four different brands concealed and coded with a shape for later identification. There were four stations with small samples of each water placed in front of each different label-concealed water. 100 people taste tested each of the four samples and their preferences were recorded using the shape code identification. Then, using a water testing kit, the four brands of water were tested for chlorine, iron, copper, nitrate, pH and hardness. The results were transferred to a spreadsheet and then to graph form.</p> <p><b>Results</b> The taste-test results indicated that Dasani Water was preferred by 39% of the subjects; followed by evian at 27%, Arrowhead at 19% and Crystal Geyser at 15%. The results of the water analysis showed that Dasani had the lowest pH and registered a 0 for hardness. Evian and crystal geyser had pH levels of 7.5ppm and 6.0ppm respectively, with hardness readings of 250 and 50 respectively. Arrowhead had .1ppm of chlorine, .1ppm of copper, 7.0pH and 250 hardness. None of the waters tested exceeded the 2004 EPA guidelines for bottled water. However, Dasani was significantly below the guidelines for hardness.</p> <p><b>Conclusions/Discussion</b> These results support the original hypothesis. The brand of bottled water with the least amount of chemicals was the brand preferred by the most people in a random testing situation. Dasani Water was preferred by 39% of the subjects and it was also the water with the lowest levels of chemicals. This is likely due to the purification process used in its bottling process. During the purification process, which involves the reverse osmosis process, most if not all chemicals and minerals are removed. This process also removes the hardness and apparently gives it a taste which is more pleasing to consumers.</p>	
<b>Summary Statement</b> This project conducted blind taste-testing of 4 leading brands of bottled water to see if the one with the least chemicals would be preferred by the majority of subjects.	
<b>Help Received</b> My science teacher helped me to order the testing kit. My mom helped proof read the paper and buy the supplies for the testing.	