



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Samsara Chahine	Project Number J0403
Project Title Single-Use Plastic Straws: Taken by Habit, by Preference, or with Ignorance?	
<p style="text-align: center;">Abstract</p> <p>Objectives My main objective was to trace down a general understanding of why people choose plastic straws over paper straws. What their needs/habits are, and if their decision is related to their level of environmental awareness.</p> <p>Methods In order to gather the necessary information, I conducted an experiment using human test subjects. Participants followed a series of preliminary steps which consisted of having to choose between a paper straw (offered in six different colors) or plastic straw (same colors as paper), then sampling lemonade with the straw, then without. I had to use deception in my experiment in order to make my results as accurate as possible. So, I told my participants "How does your perception of color (colored straw) affect the taste of your lemonade?" My actual results were collected through the survey I designed, which I gave after the preliminary steps were followed. The survey was given in order to help me better understand peoples derived reason to choose a particular straw, whether it be by habit, intention, or level of knowledgeability. After analyzing the surveys, my participants were categorized into three different groups, those who were; "Somewhat Environmentally Aware", "Environmentally Aware", and "Very Environmentally Aware".</p> <p>Results From the three environmental categories I placed my participants in, and an extended list of percentages, I realized the "Very Environmentally Aware" and "Environmentally Aware" groups had a majority choosing a plastic straw over paper straw. 64% of the 122 people I surveyed chose a plastic straw. 10% of those 122 participants chose their straw because of environmental reasons, 10% by habit, 52% because of the color of the straw. These results pertain to my objective because I now understand how many choose through habit, and that in most cases someone s level of environmental awareness doesn't affect their choice of straw.</p> <p>Conclusions After reading in the article, "The Growing Level of Environmental Awareness", that "When people experience a damaged environment, it changes their view on the world." author of this article Steven Cohen made me realize what my results meant. Perhaps this explains that the effects a straw has on the environment isn't enough to make a majority care, perhaps the layer of trash mixed into our ocean isn't what's going to inspire our everyday people to make a change. With these results, it expands our knowledge about why people choose plastic straws, over paper straws, what could/should be done to make people care about the environment, and what group of people need to be further environmentally educated.</p>	
Summary Statement Having participants follow through my experiment, and filling out a survey, I discovered that different areas of knowledge and habitual experience did not affect some people's choice between a paper or a plastic straw.	
Help Received Overall the oral presentation of my board, written portions, brainstorm, and research were all of my doing. I had assistance from my science teacher Mr. Penkala regarding the basic criteria needed throughout the project.	