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Math 1040 (Statistics)

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**Skittles Term Project Reflection**

Statistics has been a class that I didn’t expect to be as helpful as it did turn out to become in the end. I came into this class with the attitude that it was just another math class; my final one to be more precise. This thought excited me, and I was looking forward to just getting it over with. But as the semester progressed I began to realize how useful this Statistics course had become. It changed my perspective and helped me realize that math does have real world application and can be used in a manner that helps us better understand data and values that surround us. I learned that, with Statistics, math can be used in real world applications even if you’re not going to become a math major.

 I believe what I learned most from this course was that summarizing data is only the beginning. You must also learn to evaluate whether or not the data is reliable, what is its source, is it biased, is it conducted in a fair manner, are the values skewed, and most importantly what is the story that the data is trying to tell, and is the claim of the story accurate? The project that we had to complete for the course was an accumulation of all the skills we had learned throughout the semester, presented in one final, grand assembly.

 This project dealt with the famous candy, Skittles™. It was our responsibility to find many measurements and values, interpret what they were telling us, create graphs depicting the data, developing confidence intervals to state with what degree of confidence we could say a certain value would fall within a range, and test hypothesizes to identify whether we could reject, or fail to reject the original claim that was made. All of these steps together demand a great understanding and execution of the concepts/equations learned throughout the semester (to see the project in its fullness, view it on my e-portfolio site under coursework: Math 1040 (Stats), with the link; [http://enochzenger.weebly.com](http://enochzenger.weebly.com/). The purpose of this paper however, is to reflect on the project, what it has taught me, and how it will help me going forward in the future whether it be academic, personal, or professional pursuits.

## What have you learned as a result of this project?

This project has taught me that math does have real-world application. Seeing that data, even from something as silly as Skittles™, can be useful in measuring values and coming to conclusions about claims or sets of data. You wouldn’t think that something like candy could be quantified into anything meaningful. However, this project showed me that there is much to learn. For many, I’m sure, you’d think that finding such things as a mean number of candies per bag, or what color occurs with the most frequency, would be too difficult to discover. This project shows as that it is not as hard as we think. Once you’ve collected values such as colors, how many per bag, and how many people in survey, you realize you have everything you need to get started. Once I had the data set given to me, it was just a matter of completing a few equations and simple steps to arrive at complex conclusions regarding average number of candies, frequency of colors, variations of each, etc. And now that I’ve completed this project I can look like a major nerd in front of my friends and say that, with a high degree of confidence, I know about how many candies will be in a bag, and which color (red) will likely occur the most. I’m sure I’ll get some awkward looks, and maybe a few shoulder slugs resulting in dead-arms, but hey, the price you pay to look smart, right?

## Discuss how the math skills that you applied, or specific parts of the project, will impact/influence other classes you will take in your school career.

The skills and sections of this project will undoubtedly assist me in future academic settings. I am planning to attain my Bachelor’s Degree in Nursing, followed by a Doctorate with emphasis as Nurse Practitioner. Both degrees require a large amount of research and study of trends, demographics, health habits of regions/societies/ethnicities etc. By being able to find values like the mean, standard deviation, 5 number summary, and create confidence intervals and test claims, as well as evaluate data sets and define distributions of graphs etc., I will be able to verify or reject certain studies and/or reports that I may come across in my research. This will be helpful in summarizing findings of my work/research and supporting or rejecting claims made in health reports. I know for certain that this project will help me greatly in my future academic endeavors. I look forward to applying the skillsets and abilities attained from this class in life.

## Discuss how the project helped to develop your problem solving skills.

In order to succeed in this class, you must develop the ability to problem solve and create solutions from a set of data. If unable to do so, you will incorrectly or insufficiently summarize data thereby leading to erroneous conclusions. Being able to arrive at an answer proves that you thoroughly understand the data presented to you, and what to do with it. This class has taught me to take a set of data, and solve for any number of values, intervals, claims, etc. This will help me in the future to solve similar problems. I’ll be able to identify whether the information presented to me is accurate, unbiased, fair and representative of everyone/everything, misleading, reliable, and sufficiently informative. I’ll be able to state whether more data is necessary to arrive at a decision, whether the research/survey performed can be used as a resource for further reference, and whether or not we can accept/follow the opinions or advice of others if it is reliant upon values. Without question, the problem solving techniques I’ve developed in Statistics will enhance my ability to solve real-word problems.

## Discuss how this project changed the way you think about real-world math applications.

As aforementioned, this class has been the first of its kind (math) where I see what I’ve learned applying to my future. Now I can do things like read the newspaper and decide whether data or values presented are truthful or acceptable based on whether they meet certain parameters, requirements, or specifications. I can look at surveys and decide whether or not I can rely on their findings. I can do so much with what I’ve learned from this class. I used to think that math was only for those who’d major in mathematics. My opinion has changed. I now see how math, specifically statistics, has real-world application: and I look forward to arriving at conclusions for myself, having used tested, proven methods to evaluate initial findings. I will go forward with new found knowledge, ready to test the validity of a variety of statistics.