Mythbusters: Statistics Edition

Your task, should you choose to accept it, is to find a statistic and to test it. We all hear statistics on the news or read them in magazines, but how true are they? Your job is to act as mythbusters and find out!

Project Tasks

1. We will watch an episode of *MythBusters*, so you can see how the hosts test the myths submitted.
2. After watching the episode, begin your research. Find a statistic that you think is interesting or could be inaccurate using any tools available to you (Internet, magazines, newspapers, and so on).
3. In groups of three, compare the statistics you found and vote on which statistic the group would like to investigate.
4. As a group, create a simple survey to distribute among classmates and then collect the data. Use SurveyMonkey or Google Forms to create your data. It is easier to collect the data using a tablet that you can just hand to random students to take your survey.
5. Once the data are collected, one group member will create a chart and print the results. The other team members will begin outlining the presentation. Don't forget to cite your sources!
6. Conclude the project with a class presentation of your research. While a team is presenting, the other classmates will evaluate each presentation using the following chart. Include the original statistic, your survey, your findings, and a new statistic. The new statistic will be for the class to evaluate and should come from your findings. It can be true or false, but you must reveal whether it's true or false information at the end of the presentation. So did you bust a myth, or was the original statistic correct?

CHECKLIST	POOR	FAIR	EXCELLENT
Stated statistic	The team did not tell the class the original statistic or the source.	The team summarized the original statistic and mentioned the source.	The team presented the original statistic word for word and cited the source.
Created survey	The team did not create a survey, or the survey was incomplete.	The team created a survey that was a list of questions.	The team created a survey that included questions divided into categories for analysis.
Stated accuracy	The team did not tell the class the results of the survey.	The team presented a chart, but did not explain it.	The team presented a chart and explained its findings.

CHECKLIST	POOR	FAIR	EXCELLENT
Presented findings	The team had a presentation that included one to two of the following criteria: • 10 minutes in length • Statistics • Chart and findings • Survey results	The team had a presentation that included all but one to two of the following criteria: • 10 minutes in length • Statistics • Chart and findings • Survey results	The team had a presentation that included all of the following criteria: • 10 minutes in length • Statistics • Chart and findings • Survey results

Scoring Rubric

	1 SIGNIFICANT REVISION NEEDED	2 SOME REVISION NEEDED	3 PROFICIENT	4 EXCEEDS EXPECTATIONS
Objective 1: Student will create a survey to test common statistics.	• Student shows little effort in finding a statistic.	• Student does some research, and finds a statistic from a questionable source.	• Student researches and finds a statistic from a credible source.	• Student finds a statistic from a credible source and is able to cite the source correctly.
Objective 2: Student will analyze the survey results, calculate the statistics, and present findings to the class.	• Student does not create a survey or does not address the original question. • Statistic calculations and conclusions are incorrect. • Student does not present any data collected. • Student does not participate in the presentation.	• The survey created only has one question or does not clearly address the original question. • Statistic calculations and conclusions have some mistakes. • Student summarizes data collected. • Student participates little in the presentation.	• Student creates a survey that asks two to three questions and addresses the original question. • Statistic calculations and conclusions are correct. • Student presents the data collected well. • Student participates equally in the presentation.	• Student creates a survey that has more than three questions and clearly addresses the original question. • Statistic calculations and conclusions are outstanding. • Student presents the data collected well and analyzes them. • Student participates equally in the presentation and has good presentation skills.