

Statistics Final Project Outline

Name: _____

Date: _____

NOTE: This project will count as a test grade. DUE June 8th/9th (6/8 or 6/9)

I. Choosing a Topic

- Choose a general Topic to be studied (EX: HS students and Cheating)
- The more interesting the topic, the better the project will turn out
- Find a claim to test (proportion or mean) related to the topic (EX: More Juniors and Seniors admit to cheating than Freshmen and Sophomores)
- Decide on two categorical variables to study for a relationship (EX: Admitting to cheating vs. grade level)
- **Lots of Example Topics on the Website:** imaurer.weebly.com

General Topic: _____

Approval: _____

II. Create a survey/observational study

- Designing the Survey
 1. Minimum of 1 question and Max of 10 questions
 2. All questions should relate to topic **AND** should be able to collect all the data you need. (EX: What is your grade level? Have you ever cheated on a test?)
 3. Make sure your survey is mutually exclusive and exhaustive
- Choosing the Sample
 1. Method of selection needs to be random (**Don't** just survey your friends - they are not a random sample of students)
 2. Must get a minimum of 25 useable surveys returned
- Handing Out and Collecting Your Survey
 1. One option is to ask teachers to distribute your survey to their class. You must get their permission. Do not expect for them to grant you permission. ASK politely if they can help you.
 2. Another option is to create an online survey. You still need to address whether or not your sample is random and how that affects your data.
 3. Or you can hand out paper surveys yourself. You still need to address whether or not your sample is random and how that affects your data.

*****Note: Topics and data do not have to be related to or collected from CHS students. You may look for outside topics of interest and collect your data from other sources.**

Research Question: _____

Data Collection Method: _____

Approval: _____

III. Summarizing the Data with Tables and Displays

- Computer software is encouraged but not required.
- Make sure to label everything

Required Data Table

1. Summarize the responses to each question from the survey

Required histogram

2. Make sure data being used is quantitative

Required two way table

3. Comparing two qualitative variables along with the two-way table

Two Qualitative Variables related to topic that might have a relationship (2-Way Table Test):

Variable #1: _____

Variable #2: _____

Approval: _____

IV. Presenting your Data

- The paper
 1. This is your display of what you have learned and the conclusions you are making given the data you have collected
 2. Include a title page with name, title, and date
 3. 2-3 pages double spaced in Times New Roman 12pt or Calibri 11pt fonts
 4. **All** Data Charts, graphs, and all calculations should be labeled for reference in the paper. (for example Chart A, Table B, Graph C, Calculation D...)
- The presentation
 1. You will give a 5-10 minute presentation to the class
 2. This is a summary of **what you have learned** about your population of interest.
 3. You must use a visual aid that is large enough to be viewed by everybody in the audience.

Paper Format

I. Introduction

- What is the question?
- Why are you asking this question? What are you interested in?
- What are the hypotheses?
- What is the type of study? (observational or sample survey)

II. Describe data collection techniques

- Describe data collection procedures
- Discuss limitations of data collection procedure

III. Summary Information

- Numeric Summary
- Visual Summary

IV. Analysis

- State hypothesis
- Interpret results
- Attach tables and/or graphs make reference to them in your report when necessary.

V. Conclusions

- Summarize Results
- Discuss limitations of study
- Discuss possible further research