Statistical Reasoning Cumulating Project

For this project you will work with **a team of two or three (you cannot work alone)**. Your group will develop and complete either an observational study or experiment.

Project Requirements: Your team will choose between performing an observational study or an experiment. Each phase will have specific instructions and due dates. The following are requirements for each option.

Observational Study - Survey

Option 1: Survey using an SRS

- You will be given a list of the population and must create a sample of at least 25 people from this population.
- Your team will choose one broad topic and develop 2 survey questions about this topic. One survey question must yield a categorical variable and the other must yield a quantitative variable.

Option 2: Survey using Social Media

- You will complete a voluntary response survey using Twitter, Instagram Stories, or Facebook.
- Your team will choose one open ended quantitative question and 1 categorical poll you must have at least 50 responses to both.
- You must provide a screenshot of the original post and data collected which you will include in your presentation.

Option 3: Experiment

- You will perform your experiment in class on a sample of at least 10 people. This has to be an experiment that can be performed during a brief portion of class time.
- Your experiment must have a clear treatment that produces either a categorical or quantitative variable.
- You must bring all materials for your experiment to be performed on the day assigned.

General/Grading

- Each phase will be worth a total of 25 points. Each phase will be added together to form the overall project grade of 100 points.
- You will be given specific instructions on how to complete each phase as we progress through this project.
- You will not be allowed to move ahead if you complete a phase early. It is very important that you take your time and are as detailed and accurate as possible on each phase of this project. **Once a phase is turned in, you will not be allowed to recover or redo that particular phase.**
- This project is designed to be done in class. If you are absent, you will not be able to complete your piece of your team's project. If you are absent anytime during the first 2 phases, you will be required to complete a separate individual assignment. **If this assignment is not completed, this will result in a zero for that phase of your individual project grade.**
- Due dates are extremely important for this project. You cannot move to the next phase without turning in the previous. If you do not get each phase of the project turned in on time, this will result in a 10 point deduction per day for each phase that you turn in late. **This includes "my team member has it and they are absent."**

CHEATING POLICY (as specified by 2018-2019 Student Handbook):

The following examples (in addition to the others outlined in the handbook) are considered scholastic dishonesty in schoolwork and will be disciplined.

A. Plagiarism – Using the ideas or words of others without proper documentation
B. Copying the work of others when the copied material will count as part of the semester grade.
C. Selling, buying, or using papers written by another party.

DISCIPLINARY PROCEDURES OUTLINED IN THE STUDENT HANDBOOK WILL BE APPLIED WHEN CHEATING IS DISCOVERED

Phase I:	**Design**	**DUE: Tuesday 12/4**
Your team will complete and turn in an outline of the design of your experiment/survey using the 4 steps of the statistical problem solving process.		
Phase II:	**Perform Survey/Experiment and Gather Data**	**DATA DUE: Thursday 12/6**
Your group will be responsible for performing your experiment/survey in order to collect data. You will be required to turn in all of the data that your team collects. **Wednesday 12/5** – If you choose option 1, you will have access to the other classes in order to perform your survey. **Thursday 12/6** – If you choose option 3, this will be the day where you are required to perform your experiment in class with your subjects.		
Phase III:	**Prepare a presentation that documents your results.**	**DISPLAYS DUE: Monday 12/10**
Your team will describe your data using the displays and numeric measures we have discussed in class. Depending on your team's data, you will be assigned specific displays to use. You will be required to make two copies of these displays, a rough draft and a final copy. Both will be due on Monday 12/10.		
Phase IV:	**Conclusions and Presentation**	**CONCLUSION DUE: Friday 12/14**
Your team will use this information to analyze your data and make conclusions. You will present your findings as a team to the class. You will be required to submit a 1-page, double-spaced conclusion paper due on the day of presentations. Library space will be limited so prepare accordingly. You can present your project however you see fit; with the use of technology, on a poster, etc. Displays must be larger than a standard sheet of paper.		
PRESENTATIONS WILL BE HELD IN CLASS ON FRIDAY 12/14		

<u>VERY IMPORTANT REMINDER:</u> PROJECTS ARE CONSIDERED TEST GRADES. ALL MAKE UP/RECOVERY WORK IS DUE ON FRIDAY 12/14. IF YOU ARE EXCESSIVELY ABSENT OR DO POORLY ON THIS PROJECT, THERE IS NO TIME FOR RECOVERY. BESIDES YOUR FINAL EXAM, THIS IS THE LAST TEST GRADE STANDING BETWEEN YOU AND THE END OF THE SEMESTER.

DO NOT SLACK OFF NOW.

THIS IS NOT AN OPTIONAL TEST GRADE. THERE WILL NOT BE AN ALTERNATIVE ASSIGNMENT.