General Observations:

Single Digit Numbers: The single digit numbers (0-9) should be written out in words (e.g. nine, not 9).

No Abbreviations: Avoid using abbreviations.

Readable Graphic Display & Histogram Labels: Be sure you can read all labels in your graphic display. If your chosen backgrounds are making it difficult to read some labels, consider filling the text box with color or changing the font color.

Delete All of The Generic Headers & Footers: Self-explanatory**.**

Add An Optional Title Page: This page should not be numbered.

Incorporate some graphics that tie into your proposition and match the other document elements (lipstick) .

First Page:

Proposition: The proposition should be a statement, not a question. The proposition should be prominently displayed at the top of the page. Use a decorative font, and make each word start with a capital letter. For instance:

Our Team: "Three students investigated this proposition." You should use the word "three" rather than using the number 3. Adjust the number to reflect the number of students who contributed to the report. If a student has not submitted all of their work for inclusion, delete their picture and name, and proceed with two questions instead of three. Be sure to adjust the number of students in the text.

Methods: Change the section heading to a plural as shown (that was my oversight). Most of the remaining first paragraph wording can be used as written until you get to the last sentence. Here you must delete the references to dot plots and stem plots. The reference to box plots should be made plural. When finished, it should read: "In the detailed distribution comparisons, hand-written parallel boxplots were prepared to meet the remaining project requirements." If you ignored some data items because of improper reporting (e.g. student said "proficient" instead of a score), report in one sentence the number of data items you left out of the analysis and why you did not use them.

The remaining work in the "Methods" section requires you to add three questions that investigate the paper's proposition. Each question must reference a specific variable compared between two specific populations. It must be very precisely worded. The populations and variable must be described exactly as shown in the six Distribution Descriptions. Take advantage of cut and paste here. Do not try to paraphrase in an attempt to avoid redundancy or wordiness. Here are some examples of questions to illustrate.

EXAMPLE ONE:

Student Wrote: "Do juniors have a higher planned earnings in their thirties?"

This wording is TOO GENERAL. You don't have data for all juniors in the country, not even all juniors at GHCHS. You do have data for periods B & C junior Business Statistics students. Also, it does not make it clear that juniors are being compared to seniors.

Suggested Alternative Wording: "Did period B and C junior business statistic students project higher earnings in their thirties than period B and C senior business statistics students?"

In this instance, one could drop the period B and C reference and simply state: "Did junior business statistic students project higher earnings in their thirties than period B and C senior business statistics students?"

EXAMPLE TWO:

Student Wrote: "Are Per. B and C Male Geometry Star Scores higher than the Per. B and C Female Geometry Star Scores?"

This wording blurs the distinction between the variable and population. There is not a Star test labeled "Male Geometry" or "Female Geometry". Are we talking about students who took Geometry in periods B and C? It also includes abbreviations.

Suggested Alternative Wording: "Among periods B and C Business Statistics students, did males receive higher Geometry STAR scores than females?"

Notice how some common elements of the population can be grouped together to avoid some redundancy, and to more clearly communicate the distinguishing characteristic of gender.

Summary of Findings: **Each question requires you to compare the first quartile values, medians, and third quartile values. If you have three questions, then you will have compared nine parameters total.**

Each comparative paragraph is followed by a paired bar graph that visually compares the first quartile, median, and third quartile. If you have three questions, then you will have three graphic displays, each with three pairs of bars. All three graphic displays should be aesthetically compatible with each other and look like they belong as a set. If in doubt, simply make them exactly the same.

In the histogram, the x-axis should label the three pairs of bars (Quartile One or Q1, Median or Mean, Quartile Three or Q3). The y-axis should reflect the values of the variables (use dollar signs where appropriate). Include a chart title with two lines – first line describes the population (e.g. "Periods B & C Business Statistics Students"), while the second line describes the variable (e.g. "Planned Earnings in Their Forties ($1,000s)"). Adjust the size of the font to keep the title for extending beyond two lines. A legend should identify the distinguishing characteristic of the population (e.g. males, females; juniors, seniors; students considering out-of-state college, students not considering out-of-state college).

"Findings" refers to observed facts, not a conclusion. The simplest approach is to write three sentences, one comparing the first quartile, one comparing the third quartile and one comparing the median (or means if both distributions are symmetric). The resulting paragraph can be a little redundant, but it's better to be thorough than risk leaving out important details. Exclusion of details often results in unwarranted generality.

Don't just report a value as merely being higher. Provide specific amounts. Consider differences of less than 3% as being "essentially the same". Report dollar amounts without reference to the units of measure (e.g. say $15,000, not 15($1,000s)).

For this section, consider grouping common population descriptors as a precedent to shorten the sentences (see Methods Example Two). Liberal use of cut and paste will save you time here as well.

EXAMPLE ONE: Simple three sentence approach.

"Among periods B and C Business Statistics students, the first quartile value for planned earnings in their forties reported by juniors was $15,000 higher than the first quartile value for planned earnings in their forties reported by seniors. Among periods B and C Business Statistics students, the median planned earnings in their forties reported by juniors was $35,000 higher than the median planned earnings in their forties reported by seniors. Among periods B and C Business Statistics students, the third quartile value planned earnings in their forties reported by juniors was essentially the same as the third quartile value for planned earnings in their forties reported by seniors.

EXAMPLE TWO: Here's an approach that can shorten the discussion without exclusion of important details.

Examination of Geometry STAR scores for periods B and C Business Statistics students reveals that the first quartile value for males was 22 points higher than first quartile value for females; the medians were essentially the same for both genders; and the third quartile value for males was 13 points higher than the third quartile value for females.

Conclusion: The easiest part of the report. For the first sentence, use the wording provided. If most of the quartiles and medians support the proposition, then state it's "supported". If not, say it's "not supported". The second sentence is just the proposition itself. (e.g. Juniors have higher earnings expectations then seniors. Or "Juniors do not have higher earnings expectations than seniors").

If there are other interesting observations, add a sentence here. (e.g. If you found that several parameters support seniors as having higher earnings expectations, then one could add "Comparison of the planned earnings distributions suggests seniors actually have higher earnings expectations in their forties."

Detailed Findings: In the "Descriptions of Distributions" and "Comparisons of Distributions" sections, fully identify the population and variable with all known specifics. Usually this can be done by copying and pasting from the six Distribution Descriptions. Use all initial capitals in making these additions.

Remember the variable is specifically what is being measured, while the population usually identifies from whom, where and when it was measured.

Upon inputting the variable and population, it is likely each listing will be two or three lines long. Once the inputs are complete, align all the lines and extend the page number to the far left side of the page by inserting spaces and points. Each listing should be single spaced, and a blank line should separate each listing.

EXAMPLE ONE: Note the addition of the plurals in the section title.

Descriptions of Distributions:

EXAMPLE TWO: Note the addition of the plurals in the section title.

Comparisons of Distributions:

EXAMPLE THREE: An alternative comparison approach follows:

Comparisons of Distributions:

Table A. compares the distributions of:

Planned Earnings In Their Thirties in the population of Periods B & C Junior Business Statistics Students

and

Planned Earnings In Their Thirties in the population of Periods B & C Senior Business Statistics Students 10

Six Distribution Descriptions:

Delete the headers and footers. It's easy to make a heading from the first two lines identifying the population and variable. Just create a text box around the first two lines and pick a couple features that are easy to duplicate. Pick styles and colors that are compatible with your histogram.

EXAMPLE ONE: Note the label below took only a couple of key strokes.

Population: Period B and C Junior Business Statistics Students

Variable: Planned Earnings in Their Thirties **Type:** Quantitative, Ratio, Continuous

Your histogram should start off the "shape" section. For continuous variables, the X-axis should reflect a range of values for each bin (include dollar signs if appropriate). X-axis label should be the name of the variable and include units of measurement (e.g. "Algebra 2 STAR Scores", "Planned Earnings In Their Forties ($1,000s)"). Delete unused categories after the last bar of the histogram. Leave y-axis as default label of "Frequency" and counts. Chart title should name the population (e.g. "Periods B & C Junior Business Statistics Students"). If your chart titles extend into two lines, be sure to make both lines the same length (sometimes adjusting the font size helps accomplish this goal).

All of the histograms should have a consistent style. Keep it basic enough for each contributor to copy.

Each distribution description should fill only one page. Adjust the font and histogram size to make them fit on one page.

Three Distribution Comparisons:

The same comments apply here. Be sure to put the hand-drawn box plots after each of the related comparisons. The order of pages should be: comparison for question one, parallel boxplot for question one, comparison for question two, parallel box plots for question two etc.

Pagination & Document Elements: Once finished, paginate the document. The cover page and hand-drawn boxplots are not considered in the page numbers.

Choose an attractive set of document elements to put some lipstick on your hard work. The goals should be to reduce the harshness of the white page, and blend with the graphic displays, histograms, and decorative page titles already used in the report.