Hands on Variation Lab

In this lab we will focus on data analysis and conclusions. You will need to use Microsoft Office Excel or Apples iWork to complete this assignment. For this lab you need to e-mail in to [adam.lundquist@nn.k12.va.us](mailto:adam.lundquist@nn.k12.va.us), or [adam.lundquist.04@cnu.edu](mailto:adam.lundquist.04@cnu.edu), or through EnGrade.com an excel sheet that contains the following information. The rubric in on the adjacent page,

Sheet 1: renamed Raw Data

* Here you should input all your raw data from class (the numbers) broken by how you are analyzing them for your hypothesis
* Your data must have titles (see example)
* Your name and your partner’s name should appear here and only here
* Your title should be scientific, not cute, if you are looking at how students perform with the addition of an example your title should say as much. Don’t call it “If only I had an example ☹”
* You must use ATLEAST 2 formulas in this section (=AVERAGE(…) is always a good one)
* Please wrap your text or shrink it so that your titles and data are readable without me having to expand your cells

Sheet 2: renamed Final Data

* Title is carried over from your previous worksheet
* Analyzed data should also carry over
* Graph your data, make sure you have a:
  + Title which starts with FIGURE:
  + In your title tell us the sample size (n) simply put (n = x) where x is the number of data points you had
  + If I say you need error bar, or a trendline this is where they would go.
* Create a textbox either by merging and wrapping several cells or by inserting a text box. Here you will practice making a data paragraph. In scientific writing data is summarized in word format, however no conclusions (reasons why) are mentioned. Only the analysis of the raw data is discussed.
* LASTLY, right-click and delete sheet 3 as it isn’t need.

SAVE YOUR FILE AS: BIOL\_your-last-name\_time-the-class-meets-in-military-time  
so If I were to save my data it would look as follows, if my class met at 10pm: BIOL\_Lundquist\_2000

Each box is worth one of 25 points.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RAW DATA  /10 | Names in cell A1 & A2 | Title in cell B4 | Title is descriptive of the experiment | Cells are readable without effort | Sheet is renamed correctly |
| Data in column form | Title is bolded | Data is suspect or fictitious | 1 formula is present | 1 formula is present |
| FINAL REPORT  /15 | Title is same as Raw Data | Raw data is analyzed | Correct graph is selected | Graph label has sample size denoted  (n = ??) | Summary paragraph in merged cells or text box |
| Sheet is renamed correctly | Analyzed data is labeled | Graph has PROPER a title | Graph contains error bars/trend line/ other statistical analysis specified during assignment  (if necessary) | Summary paragraph of data does not draw conclusions, only summarizes |
| Sheet 3 is removed | Data is graphed | Graph is labeled (x, Y and Series if necessary) | Graph is of analyzed data (NOT Raw data) | Sufficient data is present to make a conclusion |