

**Lab #4**  
**Data Presentation &**  
**Microsoft Excel & Word**

I. Exercise 3 – DATA PRESENTATION

A. Tables

1. Most easily created in Microsoft Word
2. Should be formatted to minimize space usage
3. Should not contain vertical lines
4. Should contain only horizontal lines that are necessary to separate headings
5. Clear column and row headings (can be bolded)
6. Tabular data in each cell
  - a) When filling a table with data it is best to make all of the numbers for that column the same number of decimal places
7. Tables are useful when you want to include different results together that may not have fit on a single graph because the units (or axis) would not have been the same
  - a) Example: pulse rate, blood pressure and recovery time after exercise

B. Graphs

1. The two most commonly created figures are line graphs and bar graphs
  - a) Bar graphs are best suited for discrete data
    - i. Discrete data is categorical data with limited values and no values in between
      - i. Examples:
        1. Grades A, B, C, D, F
        2. Before exercise, after exercise
        3. male, female
  - b) Line graphs are best suited for continuous data
    - i. Continuous data have an unlimited number of values between points
      - i. Examples:
        1. masses, lengths, volumes, time
2. Graphs are easily constructed in Microsoft Excel and then copied into Microsoft Word

II. In lab today you will:

- A. Construct a table of data in Microsoft Word
  - 1. Use the data from the pulse rate experiment (Lab 1) to produce a table of your results
    - a) Provide a proper title and caption for your table.
- B. Construct a bar graph of the pecan measurement experiment according to the instructions on the table and graphing assignment sheet
  - a) The X-axis should be 2 categories (population A and population C)
  - b) The Y-axis should be mass (g)
  - c) Copy the figure into Microsoft Word and provide a proper title and caption as if it were being submitted in a report
- C. Construct a scatterplot depicting the results from the pecan measurement experiment.
  - a) The X-axis should be length and the Y-axis should be width
  - b) Add a linear trend line to the plot.
  - c) Copy the figure into Microsoft Word and provide a proper title and caption as if it were being submitted in a report
- D. Construct a line graph of the capillary action data you gathered in lab 3.
  - 1. Time should be on the X-axis and distance on the Y-axis
- E. Complete the table and graphing assignment and turn it in the following week