Methods: Data Analysis Worksheet

*Scientific Process*

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Project Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Consider each of the following questions in the context of your research objective, experimental design, and data collection. If any of the questions cannot be answered for your project, please see one of your instructors

1. For your experimental design, will you have two groups of subjects/samples (experimental and control), or will you have multiple groups (more than two)? Keep in mind that you should have multiple individuals or samples in each group, this questions focuses on the larger question of design. \_\_\_\_\_\_ two groups \_\_\_\_\_\_ more than two groups
2. For each individual sample or individual will you be:
   1. \_\_\_\_ counting \_\_\_\_\_ measuring
   2. \_\_\_\_ counting or measuring one thing

\_\_\_\_\_ counting or measuring more than one thing

* 1. \_\_\_\_ recording data once

\_\_\_\_\_ recording data twice pre/post

\_\_\_\_\_ recording data more than two times

* 1. \_\_\_\_ keeping track of individual or samples through time, so comparison can be made

on those specific individuals or samples

\_\_\_\_\_ individuals will be combined for each sampling event, you cannot track changes

for specific individuals or samples

\_\_\_\_\_ this is not relevant to your study

1. Will you be calculating mean values for each group? \_\_\_\_\_ yes \_\_\_\_\_no
2. If you are calculating mean values, will the values:

\_\_\_\_\_ be calculated based on a single time of sampling

\_\_\_\_\_ be calculated for each sampling time, and the comparison will involve change

through time

\_\_\_\_\_ include values from multiple samples in time,( i.e. average over time)

\_\_\_\_\_ this question is not relevant to your study

1. If you are making multiple measurements or counts on each individual or sample, can each be treated separately (i.e. averaged or summarized) or does the analysis need to considered the multiple data in some combined way?

\_\_\_\_\_ multiple measurements can be treated independently

\_\_\_\_\_ multiple measurements must be treated simultaneously

\_\_\_\_\_ multiple measurements can be combined into some single value (e.g. an index)

\_\_\_\_\_ this question is not relevant to your study

1. At this point, the data analysis you will be using for your proposal is:

\_\_\_\_\_ unknown *(try using the data analysis flow chart provided in class and on ANGEL, using the answers to the*

*questions above to guide you)*

\_\_\_\_\_ assumed to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_