

Experimental Design Worksheet

Name: _____ Date: _____

This is a sample worksheet to help plan your experimental design for your research project. Your responses will be reviewed by your experimental design lead whom you'll be of major significance. You should complete this form using full hand and submit a paper copy to your instructor by the deadline listed in the syllabus.

1. What is the question/hypothesis you want to test? What is your testable hypothesis? What value (your experimental measurement) of your hypothesis is suggested?

2. What DATA do you need to obtain in order to test your hypothesis? Indicate each of the several measurements and also how the data would be measured and recorded (i.e., count of cells, % area, etc., etc.).

3. What value the **INDEPENDENT** (or specific) variables/parameters (concentration, etc.)? Give some thought here as to what level of statistical analysis you'll perform. It is prudent to make sure you can analyze the data later using standard software.

4. What value your **CONTROL** for the condition(s) being tested? What will each control tell you?

5. What is your **REPLICATE** in your experiment? How many replicates (e.g., measurements, observations, trials, or test treatments & control control) will there be? Consider how long it takes to get your observations and how much time you have.

6. Outline the step-by-step procedure you'll use to obtain a single measurement or observation, and be sure to specify all the quantitative parameters there (time, temperature, when, what time, etc.) and the