Workshop: building a (remote) research project

**Guidelines**

1. **Question, hypothesis, and predictions.** Develop a question and hypothesis that interests you. Think about the testability of your hypothesis.
2. **Data collection.** You are responsible for collecting your data and using the appropriate field and lab methods.
3. **Data analysis.** You will need to decide how to analyze your data. There is a lab about data analysis, including simple statistics and graphing. Make sure that you are using the data to address your question.
4. **Critical thinking.** What might some of the difficulties be when analyzing your data? What factors may skew your interpretation? What larger factors may affect your observations and conclusions? What are some alternative explanations for your pattern? Be ready to do a literature search to help address some of these issues.

**Exercises**

1. What is your research question?
2. What observation did you make to lead to your research question?
3. What prior knowledge about ecology, behavior, … did you use to help inspire the question?
4. Is your question testable (if not, return to question 1)? Why or why not?
5. What is your hypothesis (written as a statement!)?
6. What results are possible and what do you predict will happen?
7. What are your independent and dependent variables?
8. Make a graphical illustration of your prediction.
9. Briefly describe your proposed methods? How to do you plan to collect data?
10. What equipment do you need to conduct your investigation?
11. Specifically, how will you analyze the data to answer your question?

Project name:

Topic:

Section:

Group Members:

**Field Summary**

Tasks:

|  |  |
| --- | --- |
| Tasks to be Completed | Member(s) to complete task, if all put ‘Group’ |
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |
| 5. |  |
| 6. |  |
| 7. |  |

Materials:

|  |  |
| --- | --- |
| * (item) x (# of item) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Description of each above task:

1. Restate task, Member(s)
   1. Where (common name):
   2. Where (GPS coordinates)
   3. Duration of time
   4. Detailed description of task
   5. Materials needed to complete task
2. Restate task, Member(s)
   1. Where (common name):
   2. Where (GPS coordinates)
   3. Duration of time
   4. Detailed description of task
   5. Materials needed to complete task
3. Restate task, Member(s)
   1. Where (common name):
   2. Where (GPS coordinates)
   3. Duration of time
   4. Detailed description of task
   5. Materials needed to complete task
4. Restate task, Member(s)
   1. Where (common name):
   2. Where (GPS coordinates)
   3. Duration of time
   4. Detailed description of task
   5. Materials needed to complete task
5. Restate task, Member(s)
   1. Where (common name):
   2. Where (GPS coordinates)
   3. Duration of time
   4. Detailed description of task
   5. Materials needed to complete task
6. Restate task, Member(s)
   1. Where (common name):
   2. Where (GPS coordinates)
   3. Duration of time
   4. Detailed description of task
   5. Materials needed to complete task
7. Restate task, Member(s)
   1. Where (common name):
   2. Where (GPS coordinates)
   3. Duration of time
   4. Detailed description of task
   5. Materials needed to complete task

Map(s) of Sample Area(s)

* Include Maps of your Sample Areas. This is easily done through Google Earth or Google Maps. (I prefer Google Earth, I think it is more user friendly for organizing pins)
* If your tasks take place in different areas, include multiple maps. Give each map a caption. To do this: right click, insert caption. Caption should include a short description of location and which task or tasks it is pertaining to. Example: Task 1 sampling area, Bay View Dorms
* Maps should include “pins” with GPS coordinates

**Anticipated Schedule of completion: Use the calendar in the provided excel document to map out your anticipated project completion schedule**