2023 – 570L Week 2 Worksheet:

In Lab Activities (10 Points):

1. Assess the overall stream health using the stream-health assessment guide. Note this will be done by the data recorder and only needs to be completed there – don't need to turn in.
2. Break into groups to assess the stream macroinvertabrates.
    a. Siene-netters: These people will sample the water using a kick-seine net. This is where we will need the most people. These people will collect, count and identify aquatic macroinvertebrates living in the substrate.
    b. Dip-netters: Dip-netters will work the banks of the creek to collect larger macroinvertebrates.
    c. Visual-counters: Visual-counters will observe flying insects and bank-side organisms over the sampling region. They will classify them as: Odonata (dragonflies & damselflies), Lepidoptera (Butterflies & moths), and Hymenoptera (bees, wasps, ants).
    d. Data-Recorder: The data record will be responsible for coordinating the groups, collecting information, and assisting all groups with taxa identification.
3. Collect the data! Participation is 10 points!

Completion Activities
Experiment Results (30 points):

a. What was the hypothesis for this activity (2.5)?

b. What data were collected in this activity? List all explanatory and response variables and what types of data (categorical, continuous, count, rate, etc.) (2.5):

* For this portion of the lab, we will assess the difference in mean abundance of different groups of taxa. However, we also evaluated stream health with a large variety of metrics. You do not need to report the data from the stream health assessment.

c. Create a figure which shows your key results (10):

Hint: The figure should show the average abundance of three groups compared between the two sites.

d. Report the key results in a short statement here. Utilize appropriate statistical analyses. (10):

Hint: Report the trends and use a statistical analysis

e. Make a short statement about how well these results support the original hypothesis. (10)

1. Experimental Evaluation (10 points):
    a. Do you think this experiment effectively addressed the hypothesis? What could have been done better? How would you better approach this activity if you were to do it again:

2. Ecosystem Observation:
   Write at least 5 ecological questions about the ecosystem or study topic we addressed today. Questions can be broad and across any topic however, they should be focused on ecological topics: