# Aquatic Macroinvertebrate Study Final Report

*Field Ecology*

This report is an **individual** assignment. The first part of this report will be very similar to your AMI Study Proposal; however, your final report should be written in the PAST TENSE (because you are writing this report after your project is complete). Please work in Google Docs and submit your completed report through Showbie.

**Introduction:**

In complete paragraphs, document the following information. Do NOT use letters or bullet points to show your answers to the questions; instead, answer the questions in complete sentences and paragraph form.

a. Question – In 2-3 sentences, write the "what is the relationship between" question that our class asked for this study and add a few details that clearly explains what our goal was.
b. Background Information (aquatic macroinvertebrates) – In 2-3 paragraphs, summarize the background research you have conducted regarding AMI's and functional feeding groups.
c. Background Information (turbidity) – in one paragraph, describe what turbidity is and how it is related to aquatic macroinvertebrates.
d. Hypothesis – in one paragraph, explain what you thought the answer to our question would be AND explain the scientific facts (from your research) that led you to this prediction.

**Methods:**

Your methods should clearly detail you how collected data for AMI diversity and turbidity. This section does NOT need to be in paragraph format; step-by-step lists are appropriate.

a. Aquatic macroinvertebrates – in a step-by-step list, describe the methods you used to collect and count aquatic macroinvertebrates from the creek. Also include a description of the method we used to find the diversity of AMI's in each collection area.
b. Turbidity – in a step-by-step list, describe how you measured the turbidity from your sites.

**Results:**

This section of your report consists of the summary data table you created from our class data (along with any other data tables you may have had time to create). Neatly and professionally format this data table, then copy and paste it into this document. Do not include your graph or any of the other information from the spreadsheet.

Your data table should be formatted in a professional looking way and include proper column headings.

**Discussion:**
In this section of your report, you will use your data and graphs to answer your question. This section will include a bar graph that shows the trend in our data (for the whole class), and any other graphs you had time to make. It will also include a short critique of our study.

Your graph should be a bar chart that compares the average AMI diversity in fast-moving water with the AMI diversity in slow-moving water. It should be neat and professional looking, with appropriate titles for the graph and each axis. Copy and paste your graph from Sheets into your Docs document.

For your written analysis, answer the following questions for your graph (in paragraph form; 1-2 paragraphs total):

1. Based on the height of the bars in the graph, what was the answer to our WITRB question?
2. Assuming our data was accurate and we collected enough to be meaningful, why do you think this relationship exists? In other words, what is causing your factors to show the relationship they show? Try to think about the ecological reasons that might underlie the patterns that we're seeing.
3. What are some of the possible sources of error in your study? In other words, what are some of the flaws of our study and what changes would you make if we were to repeat this study in order to obtain more accurate results?