Brick Pack Study Final Report
Biology

This report is an individual assignment. It should be typed in Google Docs and submitted through Showbie using your Corvallis School District login. **Your work should represent your own thoughts and writing**. Your data tables, graphs, and statistical analysis will be the same as the rest of the class (since that work was done as a large group) but **no other information or writing should closely resemble anyone else's report**. Citations are not necessary unless you used a unique source to provide specific information that is not generally common knowledge. Each section should be titled as shown and all writing should be in complete sentences, using proper grammar and spelling, and your paper should be in paragraph format. Include all of the information requested for full credit.

Introduction

Describe the study we conducted. Include the question we addressed along with additional details about the purpose of the project, the information we have been studying, and how it relates to ecology in general. You should also give a brief visual description of the creek in the area where we placed our brick packs. Your introduction should also discuss functional feeding groups, including what they are and how that information pertains to our study.

Methods

Discuss the methods and materials used to create your brick packs and how we determined the locations where they were placed. Using the Stream Macroinvertebrates book, briefly describe the types and names of some of the organisms we expected to find when we examined our brick packs. Explain how we collected data and calculated diversity. In simple terms, explain how we analyzed the data we collected.

This section should be written in full sentences and paragraphs, not in a step-by-step list format. Your goal is to allow someone else to duplicate our study (either in the same location or in a different location) while still collecting comparable data. The information you include in your methods does not need to discuss trivial details such as how many group members you worked with, how we labeled our tethers, or the steps we used in cleaning the room after collecting organisms

Data

Copy and paste your summary data table and bar graph into your document. Each of these should be neat, clean, and professionally formatted. In a few sentences, explain the data we saw (imagine that you were talking on the phone, telling someone from

another biology class what we found). Remember that diversity values closer to zero indicate HIGHER diversity while diversity values closer to one indicate LOWER diversity! (It's the opposite of what we might intuitively think.)

Discussion

Analyze your data by using two t-tests (one for the different water depths and one for the different kinds of leaves we used). In complete sentences and full paragraphs, answer the following questions (do NOT include the numbers in your answers):

1. According to our data, what was the answer to our question? Since we looked at two different components of habitat, you will have two answers to our question. Remember – diversity values closer to zero indicate HIGHER diversity while diversity values closer to one indicate LOWER diversity!

2. What did your statistical test tell you about our data and the answers you found to our question?

3. Describe at least 3-5 scientific explanations for the answers that we found. Your explanations should take the form of a reasonable, testable hypothesis. You can talk about the water depth and the leaf types together, or you can consider them separately in your explanation. Your goal for this part of your discussion is to suggest some implied next steps if we wanted to determine a cause and effect relationship between habitat type and macroinvertebrate communities.