

## An Ecological Exploration – Final Assessment for AUBIO 253<sup>1</sup>

### PURPOSE AND LEARNING OBJECTIVES

The overarching learning objective in this course is for you to be able to describe and explain how abiotic and biotic environmental factors interact to contribute to the ecological properties (structure) and processes (function) that are observed from the scale of an individual organism up to a biome.

You are going to be embarking on an ecological exploration of a physical location that is of value to you. This might be your backyard, a local park, a distant location you have visited before. You are going to picture yourself (or even situate yourself!) in that location throughout the semester and envision the ecological interactions surrounding you. What is the local climate? What kinds of organisms live there, and how are they able to survive the climatic challenges (hint: everywhere on Earth has climatic challenges for organisms!)? Looking at 2 focal species, what are their life history traits? What kind of population structure would they have? What types of interactions would they experience? Through addressing these types of questions and connecting the content from the class, the goal is to facilitate in-depth ecological learning by opening the door to new ecological ideas and questions while interacting with the environment, regardless of geographic location.

Humans are inherently connected to the environment, and the purpose of this assignment is for you to have opportunities throughout the semester to make linkages between course topics and a physical place that has unique value for you. These opportunities will culminate in creation of a website that applies the ecological concepts that you have learned to interactions within your special place, and a reflection where you will articulate how this project has influenced your knowledge of ecological interactions.

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### GENERAL DETAILS AND WEBSITE GUIDELINES

You will use Google Sites to build your website and I recommend you work on it throughout the semester for 3 reasons:

- 1) You will be making connections between the content and your life on a regular basis which will help with solidifying your understanding of the content (and also providing you with further examples to use on your 2 term tests!)
- 2) I anticipate that you will need 15-20 hours to produce a website with high quality information presented in a meaningful and pleasing manner.
- 3) You can (optionally!) receive informal feedback from myself and one peer if you are already working on it!
  - Optional instructor feedback – I will set-up Zoom appointment slots (10 minutes each) from March 9-16. If you book an appointment, you will share your screen with me, outline what you have done, what you plan on doing, and ask any questions you have. I will provide you with oral feedback on your progress.
  - Optional peer-review – During the week of April 12-19, you will have the opportunity to have informal peer-review. I will send a Google Form the week before that in which you will indicate your interest and what you want your peer to focus on, and I will organize pairings and provide a peer-review form. The peer-review form will need to be submitted along with your final submission.

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The benefit of creating a website to document your learning is that you can easily incorporate numerous types of information and media, including podcasts (maybe made by you), videos (that you make), YouTube videos, etc. You are also free to format it in any way that you wish, while keeping a few website things in mind:

- Your audience: Assume you are writing the website for people with a general understanding of ecology (i.e., your AUBIO 253 peers) – use appropriate vocabulary throughout and demonstrate your mastery of the content
- Ensure the site is organized and easy to navigate! For example, use subsection tabs across the top of the website rather than a dropdown menu.
- Have a plan! I like to sketch things out as I am building anything – just an idea that may help you to keep organized!
- I will be viewing the site on my computer, so no need to worry about mobile compatibility
- Proofread the content! Spelling, formatting (e.g., scientific names) and grammar errors significantly detract from the content
- Use a good colour scheme – ensure the site is pleasing to the eye and not overly complex

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### **SOME SPECIFICS** (more information provided throughout the semester!)

In each lecture topic, I will provide you with a list of guiding questions to help build the content of your website. You have flexibility and creative control as to how you will address each question while ensuring you are demonstrating your understanding of the material! When we meet synchronously for each of the topics, I will outline the questions, which will allow you the opportunity to ask clarifying questions. The written questions will also be included in the “An Ecological Exploration – Final Assessment” tab on eClass. Generally, this is what the content will look like:

- Introduction to your special place (note: this can be the same place as you are using for Lab Topic 1!)
- Topic 2 – climatic information for your place
- Topics 3-7 – you will select one plant and one animal species that you have observed in your special place. Over the topics, you will be investigating different aspects of the organisms’ biology with a focus on
  - Water relations
  - Temperature relations
  - Nutrient relations
  - Niche
  - Population structure/growth
- Topic 8 – ecological interactions (this has to be different from what you are doing in Lab 5!)
- Ecological questions – tying it all together
- You will have a reference page that is in CSE format – this includes citing photos and websites. It is difficult to format references properly in Google Sites, so you may want to have a tab named references and then provide a link to a Google Doc that has the properly formatted reference list.

**Please note that you will want to adjust the settings of your sites so that it is kept private and only you and I have access to it (and your peer-reviewer if you choose to go that route).**

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## FINAL REFLECTION

Through reflection on an experience, we can often identify some of the key learnings that came out of the experience, as well as understanding the process of learning. The reflection that will go along with the website is going to be in video format – I want you to articulate your process, your learnings, and what you will take away from your ecological exploration; ultimately, you are going to explore what you have learned from the experience beyond the actual content within it!

Your video reflection will be a maximum of 5 minutes – you are going to want to write down your thoughts before you record your reflection to keep yourself organized, but I recommend not writing a script. In your response I want you to:

- **Describe your overall experience** – when did you start working on the website content, were there any topic questions that you really struggled with? What made those questions more difficult than others for you to answer?
- **Examine the experience of your ecological exploration website** – what assumptions/expectations did you bring into the experience? How did that affect how you felt about it? How did the process of creating the website change throughout the semester? If you were to do a similar type of exercise again, how would you alter your approach?
- **Articulate your learning** – use each of the following prompts to help you articulate what you have learned through the experience:
  - “I learned that...” Express an important learning, not a statement of fact and not only in the context of the experience
  - “I learned this when...” – connect the learning to a specific activity/reflection that gave rise to it
  - “This learning matters because...” – consider how the learning has value, in this situation and in broader terms
  - “In light of this learning I will...” – set specific goals relating to your education and experiences in general (e.g., how will this activity help your learning in the future?)

*In other words WHAT did you do, SO WHAT did it mean, NOW WHAT will you do in the future?*