**Teaching Statement**

My goal as a teacher in the sciences is to facilitate student growth holistically. I have extensive experience teaching students from all levels - undergraduate non-major to graduate level - in both broad, introductory environmental science courses as well as more focused seminars. In each of my classes, I strive to enable students to build the knowledge and skills necessary to become capable, critical thinkers who can utilize these skills as they interact with the world around them. My passion for teaching comes from seeing students grow comfortable and confident in their abilities to tackle challenging questions, to question assumptions, and to arrive at new understandings and perspectives. In my teaching I designate space for active and experiential learning, allowing students to interact with material in meaningful, dynamic, and engaging ways. My student-centered approach enables students to be active participants in the construction of knowledge and contribute to a community of learning that encourages peer feedback and personal reflection.

I use a variety of active learning techniques in my teaching that enable students to develop and hone fundamental skills. In the course Principles of Animal Behavior, a seminar for non-majors, I scaffolded my weekly discussion groups to help students build from first reading and understanding a scientific article, to then applying its findings to the main course concepts, and finally analyzing and critiquing the results. I focused particularly on building student capacity in analyzing figures. After reading and identifying the hypotheses and main question of Hau et al.’s (1998) *A Neotropical Forest Bird Can Measure the Slight Changes in Tropical Photoperiod*, I provided students with two blank graphs. I asked them to draw results that would support and not support the author’s hypotheses on changes in gonad size, hormones, or song activity in response to experimental shifts in photoperiod. Students then shared and discussed their graphs with their peers. Finally, I asked students to compare their graphs with the actual graphs in the paper, and evaluate the author’s findings and conclusions in this context. Such activities spurred more critical evaluation of author findings in future readings, as students were more confident in their abilities to assess results, and students were successfully able to interpret graphical findings in the midterm exam.

Enabling students to guide and construct their own knowledge provides a particularly enriching learning experience. In the master’s level course, Sustainability Science, I worked individually with each student to craft a research paper on a modern topic of their choosing. Throughout the semester, I guided students through the process of finding a relevant question, conducting research using online databases, identifying proper primary sources, obtaining and organizing relevant information, and writing a scientific review paper. Because of the personalized manner in which I worked with each student, I was able to tailor my guidance to meet the needs and goals of each individual. For instance, one of my students was interested in the ecology and conservation of pangolins, but struggled to find appropriate literature on the subject. Over several zoom meetings, we worked together to find useful search terms in Google Scholar and the Columbia Library. After digging through the published literature, we found subject matter experts at the San Diego Zoo and Michigan Tech that the student personally interviewed to gather more information. Through multiple drafts and emails, we worked through how to include these less-traditional sources in her academic writing. With students working on subjects ranging from the use of indigenous knowledge in mitigating climate change to childhood nature deficit disorder in marginalized communities to the impacts of mining practices in Brazil, I found it crucial to break down perceived notions of teacher and student as expert and novice, and allow students to explore and develop their own ideas and knowledge. Additionally, I learned a great deal about the ways in which my own expertise in science and research can conceal basic principles and strategies that are important for students to understand but are often missing from the curriculum, a realization that made me a more effective educator.

I aim to bring basic biological concepts to life for students. By using recent case studies, I am able to connect basic biological concepts with real, engaging examples that students can relate to. In particular, case studies help students increase their understanding of complex problems and bridge the gap between theory and practice. In a lecture on the endocrine system in the introductory course Environmental Biology for undergraduate majors, I used research examples to demonstrate the relationship between hormones and behavior. To illustrate the relationship between plumage, aggression, and testosterone, I used Enbody et al.’s (2018) *Female ornamentation is associated with elevated aggression and testosterone in a tropical songbird.* I first guided students through the paper’s main question on the selection pressures acting on *female* ornamentation, a newer concept in this field, the authors’ hypothesis regarding the role of testosterone, and their experimental set up. After viewing the results with the class, I had students work with a partner to assess how the results effectively (or ineffectively) illustrated the predicted hormone-behavior relationship. Finally, students discussed as a class how the hormone’s function related to the endocrine system as a whole, elucidating the link between the hypothalamus, the anterior pituitary, and other hormones involved in this endocrine response. This interactive style of lecturing enhances student engagement, prompting many questions and discussions from students, and peaked one student’s interest enough to join our lab!

I am invested in my students’ growth as scientists, thinkers, and people. I aim to create a space that encourages students to think critically, consider new perspectives, and become active participants in both the generation and sharing of knowledge. In particular, I believe that an inclusive classroom that recognizes and celebrates the unique skills and mindsets of each individual is essential to curating a true community of knowledge.