At Longwood University, the Biology department takes pride in assisting students to prepare and present (orally and in writing) to scientists in other disciplines and audiences outside the sciences. While other scientist peers may have an idea of research occurring in the community, general citizens don’t. Progress can’t be made in labs unless supported by individuals who donate funding and time to make these pieces of work happen. General audiences also play a large role in the scientific community. Whether it’s climate change, anti-vaxxers, or biological conservation, general members of the community need to know the facts in order to support arguments and made change. In order for these members of the community to do their part, it’s our job as scientists to be able to convey our complex research in a way that’s easy to understand. Through my Biol 288: Sophomore Seminar, Biol 399: Evolution, and Biol 432: Freshwater Ecology courses, I have had the opportunity to convey semester research to a general audience.

In Biology 288, our semester consisted of choosing a topic, which we would write a general audience paper and review paper on. The general audience paper was assigned to help us learn to convey complex scientific topics to audiences that needed a more basic explanation. My general audience paper focused on sea turtles, and how rising temperatures affect their survival. Climate change can be a confusing topic for those who don’t understand the fundamentals of science and how it is occurring. In order to convey this to a general audience, I used sea turtles to put the consequences into perspective. By discussing the negative effects that rising temperatures have on climate change, the general audience was able to see what outcomes came from human carelessness and how to help fix these problems.

In Biology 399, our class focused on evolution and how it can be put into a general context. For a long time, there has been a battle of whether evolution is real and if it should or shouldn’t be incorporated into school curriculum. My group was tasked with creating an interactive project, that could help convey the concepts of evolution to an audience uneducated on the topic. We decided to explain how mutations evolve over time to middle school students. Although we never actually performed a study, we were assigned to propose an activity, which could help teach these students. My group decided to play the game telephone. As many know, when a sentence is passed along through a string of people, it very rarely ends up how it started. This is also very similar to how mutations work. The goal was to pretend a simple sentence was a “gene” and each time the message was messed up; it would be considered a mutation. This was a fun and interactive project, which helped students who were not proficient in the subject learn how genes evolved.

In Biology 432, we were tasked with performing water quality testing on a local lake owner in Farmville, Va. We spent the semester running nutrient bioassays, mapping, and other tests to ensure the owner that it was safe for recreational activities. Through this process, many biological techniques were used including nutrient filtering, florescence microscopy, and data analysis. These tests gave us the answers we were looking for, but it was our job to present this information in a way that the landowner would understand. At the end of the semester, we were tasked with creating an informative, yet understandable presentation. My group in particular focused on the nutrient bioassay of the lake. By breaking down definitions and different methods of the project, we were able to effectively relay the necessary information, without confusing the landowner.

Through these assignments, I was able to prepare and present to scientists in other disciplines and audiences outside the sciences. Educating the public is a crucial part of science, therefore perfecting these skills are a vital component to my undergraduate learning.