DO NOT CONSIDER FOR TALK

2025 SEA Symposium Abstract

Connecticut State Community College Northwestern

Winsted CT

Corresponding Faculty Member: Sharon Gusky (sharon.gusky@ctstate.edu)

The Students' Journey in Phage Discovery

Vanessa Szabo, Maria Morales, Valeria Cardenas

The General Biology class at CT State Community College Northwestern in Winsted, CT is participating in the SEAPHAGES (Science Education Alliance – Phage Hunters Advancing Genomics and Evolutionary Science) Project. Through this project, our class has been introduced to fundamental biology and lab concepts while getting hands-on experience and performing research that has real world applications.  
As part of the SEAPHAGES curriculum, students in our class successfully isolated 2 different bacteriophages from soil samples collected from the local environment. The class worked in 6 groups to perform various protocols to isolate the phages and amplify them for further research. This included enriched isolation, spot tests, 3 rounds of purification, titers, and DNA isolation and amplification to prepare the phages for further genomic analysis.   
This experiential learning opportunity made possible by the SEAPHAGE project, has reinforced biological concepts such as interactions such as cellular mechanisms, biotechnology, evolution, structure and function of biological macromolecules, and the role of DNA in heredity and evolution in bacteria, phages, and animals. The hands on experience helped our class to develop critical thinking and analytical skills, while gaining skills in lab techniques and a deeper appreciation for biological research and its real world applications.