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2024 SEA Faculty Meeting Abstract

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Consistency in the Classroom: Data Cards for SEA-PHAGES Discovery

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SUNY Plattsburgh has been a member of the Science Education Alliance since 2019, offering sections of SEA-PHAGES discovery, SEA-PHAGES bioinformatics, and SEA-GENES each academic year. To date, we have offered 12 sections of SEA-PHAGES discovery, with over 200 students registered for the lab, the majority of whom have elected to work independently. Overall, this translates into a lot of phage to photograph, document, and keep track of. As time has progressed, we came to realize that we needed a more consistent way of collecting student data from the phage discovered each semester. Therefore, inspired by the data cards used in the SEA-GENES program, we have developed data cards to formally document results from each experimental landmark in the SEA-PHAGES discovery flowchart. Namely, phage isolation, purification, amplification (titer calculations), and DNA characterization. Much like the data cards used in SEA-GENES, these information sheets provide consistency for each documented phage collected and provide reference files that SEA faculty can access later. Each data card template has an associated checklist and specific instructions to facilitate appropriate completion of the card by the student. We envision the use of data cards for additional checkpoints, such as electron microscopy, sensitivity assays, and host range assays, as the need arises.