

Seafaring on the Web
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Eleventh Grade Biology
High Tech High International



In this project, a hybrid of remote and on-campus learning, students underwent an exhaustive research project featuring one marine species local to San Diego. Each week featured a new ecological topic of research beginning with the abiotic (non-living) factors of their ecosystem (soil type, depth, access to sunlight, pH levels, etc.) continuing with the many interactions within their community, and ending with the unique anatomical and behavioral characteristics of their species. Their final presentation included a self-made food web, population dynamic graphs based on citizen science data obtained from the Reef Check Foundation, and even a trading card used to compare different species researched in the class.

Some of the guidelines of this project were taken from a land-based research project written by Zakary Beltz of HTHCV.

Teacher Reflection

It was refreshing for students to research species that are not only part of a very complex ecosystem, but are also local to San Diego. Each of the researched species could theoretically be observed in the wild five minutes from our campus. In fact, I was concurrently ocean diving during the time of this project, and was able to show videos of my students' species that I would record during my dives. Also, in the short time that we had together on campus, students collected samples of various plankton in our local bay to observe, photograph, and identify. Students were blown away by the biotic activity they were able to see under the microscope versus the seemingly lifeless water they observe with their naked eyes.

—Lucas Sexton

Student Reflection

The sea louse I observed really surprised me because I wasn't expecting to see any plankton when I took the water from my tow. Also, this specimen was moving around so much and it was really cool to watch once I saw him under the microscope

—Adam

It feels wrong to say this because of how bad climate change is, but I liked that my species was one of the few that was thriving from human impact.

—Alondra