Physical Geography at Everett Community College and in the Puget Sound

Since 2008, classes at EVCC have immersed themselves in one of the most important questions confronting future generations of learners: “What is the current health of Puget Sound, and where are some of the most important areas to pay attention to?”

What started as an experiential trip to Deception Pass has expanded to over 6 locations across Puget Sound covering over 15 different waterbody locations, 12 freshwater locations, in addition to water quality monitoring, classes now also tap and try shrimp from Whidbey Island, which are especially fun on the beach, in over 20 locations. Classes spent an entire weekend from Friday morning to Sunday afternoon collecting data and staying at different Washington State Environmental Learning Locations across the Puget Sound: Mirror State Park, Everett Bay, Northwind, and Fort Flagler.

Learning skills and objectives supported: Students learn how to use handheld GPS units, which different water-quality measures such as pH, dissolved oxygen, salinity, and conductivity exist, how to map their data and conduct a story map in ArcGIS online, and how to construct a research question based on the data they collect.

The transformation that happens during this experience is empowering to undergraduate students, as they learn that they can truly make a difference in the world they live in through the skills they are learning in their academic setting. Also, the transformations in the classroom are not limited to the students themselves. The students and instructors provided personal input and support each other, and in general, how many first-hand based outdoor learning is expensive and requires a lot of planning, but it is so beneficial in the end.

There has been an evolution of sorts, as this class and the data it collects has evolved. What began as 1 location, is now 6, and covers most of Puget Sound. Seven years ago, we were experimenting in various aspects of how we were collecting our data, and with better equipment. Thanks to the support of the State Foundation for Endangered and Puget Soundkeeper, during, we were able to expand our use of the ArcGIS platform and have access to location-specific studies and trips on Fort Gardner by Everett. Again, a special thanks for their support.

We look forward to doing more research and moving on to the next step of this journey wherever that may entail.

WATER QUALITY FROM THE LOWER ELWHA TO ORCAS ISLAND
By Dustin Caldart and Kerry Lyste
Everett Community College
For the Association of American Geographers Annual Meeting 2021

The Data:
Having control of this data has been a simple undertaking, as it spans across more than a decade with 2 different times a year. This work is part of our research and is not just the margin of error of equipment, but human error as well. We have steadily been working towards collecting high-quality data that we are now working on the search of which we will make available to the public as was recently released publicly. Our data is available on ArcGIS Online as an interactive data set for Saltwater, Freshwater, and large Whidbey Delta. Please refer any questions to:
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