

PROGRAM SPOTLIGHT: MARINE BIOLOGY



Students engage in real-world research while expanding their marine science literacy

Julianne Bonnell's Marine Biology classes at Chimacum Jr./Sr. High School are opening a window into the abundant marine ecosystems around the world, while helping students connect their learning to the local marine ecosystem here in the Puget Sound.

By taking this class, students have the opportunity to learn about concepts of oceanography, marine populations and relationships, and climate change and human impacts on the ocean.

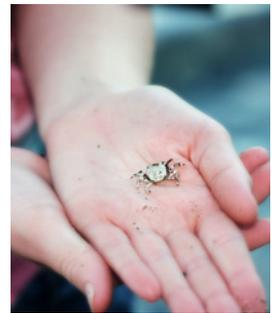
"It's important to me that my students move into the adult world with a background in marine science so they can appreciate the wonder of the complex biodiversity of our oceans and serve as critical ocean advocates in their communities," explained Bonnell. "As the impacts of climate change on the marine environment become increasingly clear, my hope is that my students will have a fundamental understanding of the human causes behind those impacts as well as ideas around current and potential solutions to restoring our fragile marine ecosystems."

Even with the challenges of the 2020-21 school year, each Marine Biology student has already presented an in-depth study of a marine ecosystem of their choice, conducted peer reviews of their classmates' presentations, applied their understanding of ocean chemistry to the waters of the Puget Sound, and analyzed maps and data tables provided by the National Oceanic and Atmospheric Administration (NOAA) depicting marine animal migratory patterns from satellite tag data.

Currently, 60 students are enrolled in Marine Biology. Ten of those students are earning college credit through the College in the High School program offered by Everett Community College.

Next up for her students, Bonnell plans deeper dives into marine research, data analysis and at-home labs through the Savvas Marine Science curriculum.

"My hope is that this course will inspire students' appreciation for their roots here in Chimacum and the Puget Sound, while continuing to capture their interest in marine ecosystems around the world," she said.



Behind the Program: Julianne Bonnell

As a graduate of Chimacum Schools, Julianne Bonnell now teaches Science next door to the classroom where she studied it as a student! Following her K-12 education in the district, Bonnell earned a degree in Zoology from Oregon State University.

In 2015, Bonnell moved to Woods Hole, MA to work in marine mammal bioacoustic research for the National Oceanic and Atmospheric Administration (NOAA) and the Woods Hole Oceanographic Institution (WHOI). She eventually returned to Washington to complete her Master of Arts in Teaching at the University of Puget Sound. Bonnell continues her bioacoustic analysis part-time with WHOI, enabling her to engage her high school students at Chimacum in current real-world marine research.



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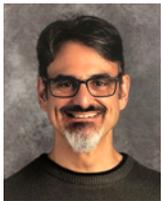
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BUILDING STEAM

In Chimacum School District, our students are combining Science, Technology, Engineering, Arts and Mathematics (STEAM) to learn, explore and problem solve in creative and innovative ways. Follow all of our STEAM learning at www.csd49.org.



Q&A with science teacher Alfonso Gonzalez



Alfonso Gonzalez is a 6th grade science and STEM teacher in his 24th year of teaching in Chimacum. You can read his full interview at www.csd49.org.

Why are you passionate about science?

I started teaching 4th and 5th grade in South Central Los Angeles and of all the subjects, science was one that most kids looked forward to. Science was the subject where kids could learn hands-on and find their own answers to their own questions.

Chimacum is a STEAM district. How, in your opinion, does this benefit students?

STEAM benefits students because it provides context for learning. When you ask a student to learn about salmon and how much dissolved oxygen they need to survive to make sense of the dissolved oxygen data we are collecting from our own creek, that makes sense. There is purpose to the research kids will do. Living where we live provides us such amazing learning opportunities that are important and relevant and STEAM gives all our students a pathway into all that learning and growing!

What is something unique about the district or the community that you love?

Being situated in a rich valley with access to farms and organizations that are willing to work with our students to teach them about growing food and plants and how to be stewards of our watershed and creek. We have a great community willing to help not just grow food, but also grow our kids and, as the saying goes, it takes a community. Well, we have that here. Being a small district provides all our kids a chance to get to know all the adults in pre-K through 12th grade who are here to support them.



6th graders in Mr. Gonzalez's class learn about science by studying the water quality and fish found in the creek that runs by the Chimacum Elementary School.



CAMPUS CONNECTION

Outdoor gardens and a newly-built greenhouse bring science to life

All three school buildings in Chimacum School District feature outdoor learning spaces and fresh air gardens, offering hands-on educational experiences to students in all grades as they learn about science, life cycles and the local food system. And now, thanks to a Healthy Kids grant from OSPI (Office of Superintendent of Public Instruction) and the work of numerous community volunteers over several weeks, a newly-built greenhouse is ready to serve students at Chimacum Elementary School.

"We have been so excited watching our new greenhouse being built in our school garden!" said Principal Jason Lynch.

Complementing the school's existing garden, the new greenhouse will give students a better opportunity to grow, taste and appreciate fresh local fruit & vegetables, learn about the science behind growing food, and serve as an anchor to the district's STEAM-focused mission: to use Science, Technology, Engineering, Art and Mathematics as a foundation for unique and powerful learning experiences rooted in the community.

Chimacum School District does not discriminate in any programs or activities on the basis of sex, race, creed, religion, color, national origin, age, veteran or military status, sexual orientation, gender expression or identity, disability, or the use of a trained dog guide or service animal and provides equal access to the Boy Scouts and other designated youth groups. The following employee has been designated to handle questions and complaints of alleged discrimination: Civil Rights, Title IX, and Section 504 Coordinator; Melinda Miller; PO Box 278, Chimacum, WA 98325; melinda_miller@csd49.org; 360-302-5886