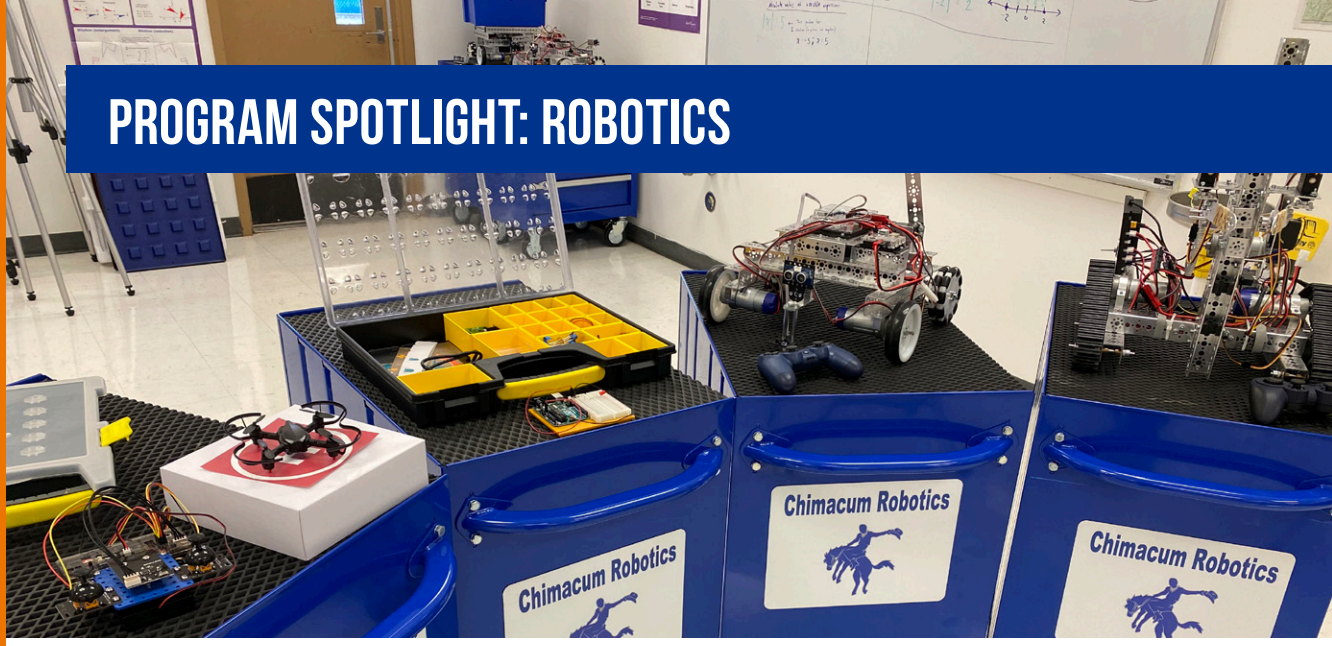
ENGINEERING

CHIMACUM SCHOOL DISTRICT

BUILDING STEAM

PROGRAM SPOTLIGHT: ROBOTICS



Students at all grade levels learn through robotics

From primary school and beyond, the teachers in Chimacum School District are using robotics to encourage problem-solving, creative thinking and innovation, helping students discover that subjects such as engineering and math are much more than abstract ideas.

For example, last school year Chimacum Creek Primary School students began working with colorful, easy-to-operate robots called, "Bee-Bots." Designed specifically for young children, these robots provide students with an opportunity to learn about and practice coding and engineering concepts. Also last year, the school held its first ever STEAM Family Engagement Night, which included engineering races and "Bee-Bot" coding activities for the whole family.

"We are excited to continue these programs throughout the coming years," said Chimacum Creek Primary School Principal Kyle Ehlis. "Students and staff share an interest in these creative learning opportunities, which assist in the development of the full-child with our youngest learners."

Over at Chimacum Elementary School, prior to the COVID-19 pandemic, students in 5th and 6th Grade competed in the "FIRST Lego League Robotics Challenge." The challenge required students to consider the physical and social/emotional challenges of long-term space travel.

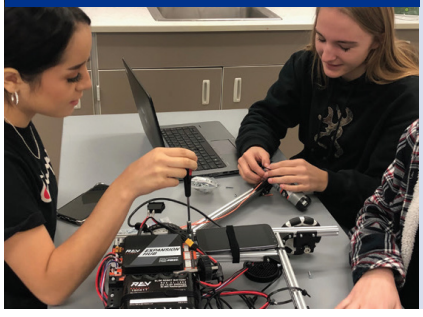
"Students considered these problems and created innovative solutions using robotics," explained Chimacum Elementary School Principal Jason Lynch. "Their solutions were then presented at a competition at Bainbridge Island High School, and two of our three teams advanced to the semi-finals at Amazon headquarters in Seattle!"

At Chimacum Jr./Sr. High, teachers are brainstorming new ways to enhance the school's robotics program. Plans in the works include an after-school Robotics Club for all students and an elective class for middle school students.

"We hope to introduce students to multiple types of sensors and motors, programming complex motion, wiring and power systems, and offer advanced students the opportunity to design their own robots that perform specific tasks," said computer science teacher Charles Fornia. "Our focus on programming makes robotics a natural arm of our computer science program.

From kindergarteners to high school seniors, teachers say they've already seen a difference in their students with the introduction of robotics, as they are ignited by the opportunity to apply and extend this learning to solve real-world problems.

CAMPUS CONNECTION



STEAM spaces for K-12 students

A focus on career opportunities in science, technology, engineering, art and math led to the creation of new STEAM spaces in Chimacum schools.

The new spaces include dedicated robotics classrooms that feature tables and carts for groups of students to build robots on. Other amenities include 3-D printers and upgraded emergency eyewash and shower stations to improve safety in science rooms.

"Our mission is to use STEAM as a foundation for unique and powerful learning experiences rooted in our community, and our facilities help make that possible," said Chimacum School District Finance Director Art Clarke.

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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 3rd grade teacher Michelle Moseley

Michelle Moseley is a 3rd grade teacher who enjoys bringing engineering into her elementary classroom. You can read her full interview at www.csd49.org.

Let's talk about engineering in your classroom. What have your students learned about so far this year?

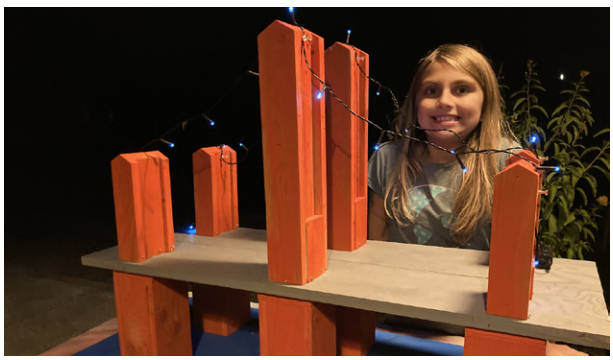
At the beginning of this school year, our interest in engineering was sparked with the reading of Rosie Revere Engineer by Andrea Beaty (inspired by Rosie the Riveter from WWII). This sweet story shares whimsical dreams of gadgets & gizmos engineered by young Rosie. I love sharing this story with my students. It inspires ingenuity, instilling a belief that dreams are achievable and that no matter what, never give up!

What do you enjoy about teaching engineering?

I enjoy the fact that most engineering exercises are extremely engaging. Engineering assignments require 'all hands-on deck.' When the reading from our textbook comes to an end, it's time to put the words into action!

Can you describe a favorite engineering assignment from this school year?

One favorite story read from our 3rd Grade Curriculum is 'Pop's Bridge,' by Eve Bunting. This historical fiction short story reflects on the workers & their roles in the construction of the Golden Gate Bridge. At the close of this narrative, students are introduced to seven central bridge designs: beam, truss, cantilever, arch, tied arch, suspension, and cable stayed bridges. This assignment was particularly memorable to me because every student participated and engineered their very own bridge!



LEFT: Fisherman's Bridge by Engineer Eli RIGHT: S'Klallam Bridge by Engineer Lila & her 'Pop'

Behind the Program: Thaddeus Jurczynski

Thaddeus Jurczynski has been teaching Chimacum School District's K-12 Pi Program for five years. A family-oriented "Alternative Learning Experience," the program offers students a path to academic success through experience-based activities, time flexibility and the chance to dig deeply into subjects and themes that inspire.

Jurczynski grew up on a 50-acre tree farm in rural Northeast Ohio. During his youth, he spent hours tromping around the local creeks and hollows, which helped to inspire in him a wonder of the natural world. He graduated from City College of the City of New York in 1985. His interests include hiking, bicycling, farming, theater, and puppetry.

As an educator, Jurczynski feels his role is to act as a catalyst and to provide students with the tools, materials and guidance they need for discovery learning. He enjoys teaching engineering skills to promote problem-solving, critical thinking and creativity.