The Academy Structure

Watsonville High School has an innovative educational structure, where each student spends three years in one of seven small-learning communities, or Academies. These schools-within-the-school provide career-focused pathways centered around project-based learning.

The ESNR Academy guides students to postsecondary education and jobs in the relevant fields of agriculture, environmental management, and green technology.

Summer Research Fellowship Program

Training in Inquiry-Based Pedagogy

During the summer, Graduate Fellows and Teacher Partners share areas of expertise, build collaboration through hands-on science, and develop exciting and effective inquiry-based curriculum.

A summer workshop kicks off this research experience with an intensive introduction to field-based inquiry projects. The project, led by UC Santa Cruz faculty, is based on the Organization for Tropical Studies field problems module, and are conducted in the UCSC Natural Reserve, labs, and greenhouses.

Teachers as Practicing Scientists

Teachers then apprentice to GK-12 Graduate Fellows who are working on their dissertation research for hands-on research experience.

This year, Teacher Dan Johnston joined Fellow Jorge Torres in his native Costa Rica to study how management practices affect the regeneration of secondary growth forests on private lands.

They used transects to identify species composition, and field experiments to evaluate the impact of management practices on seedling regeneration.

Fellows’ Research Into the Classroom—And Beyond

Nina Arfberg
PhD Candidate in Ecology & Evolutionary Biology

I study the behavioral ecology of Golden Crowned Sparrows on the California Central Coast.

In partnership with the Watsonville Area Teams Conserving Habitat Program of the Monterey Bay Aquarium, I am working with 10th-12th graders from the Marine Biology class, guiding students in a year-long study of bird behavior at the Elkhorn Slough National Estuarine Research Reserve. Students go through a complete scientific investigation of their own design, from initial observations to experimental design, and then presentation of their findings. Each semester, students spend 12-16 days collecting data in the field.

Elizabeth Basio
PhD Candidate in Ecology & Evolutionary Biology

I study variation in sexually selected traits (like throat color) of a lizard that lives in Mexico.

I use field observations, laboratory behavioral trials, and genetic markers to understand how variation is maintained within and among populations. Ultimately, I want to know whether the mechanisms that maintain variation in sexually selected traits contribute to divergence between populations that can lead to the formation of new species.

Tara Cornelisse
PhD Student in Environmental Studies

The Othello tiger beetle is an endangered species endemic to Santa Cruz County. My research aims to determine what factors—habitat quality or habitat size and isolation—affect the beetle population in its remaining habitats.

I measure many habitat characteristics, including the success of seedlings in the beetle’s population viability at each site.

I also investigate the effects of human activity on the beetle’s status as well as potential management techniques to augment the beetle’s populations. I aim to bridge science and conservation management.

Jennie Liss Ohayon
PhD Student in Environmental Studies

I research ecological and social aspects of the strategies used to restore native plant communities in Superfund sites following environmental remediation.

I use experimental and comparative studies to understand how to create initial native vegetation that is self-sustaining and resistant to invasion by weeds.

I also investigate how local communities participate in scientific decision-making about the restoration process.

SCWIBLES has been a great opportunity for me to expand my skills and public involvement in science.