Education is Change on the Ground

Estuaries X Imagination

Our Teachers on the Estuaries program provides on-site and virtual workshops, exposing participants to ‘āina- or place-based and student-centered learning techniques, culminating in projects tailored to the passion of each teacher. Our last cohort was amazingly creative; one teacher coped with pandemic impacts, restricting opportunities for student field trips, by building the He‘eia National Estuarine Research Reserve (NERR) in Minecraft, customizing new avatar superheroes of the ae‘o (Hawaiian stilt) and pinao (giant Hawaiian dragonfly). Her second graders loved the virtual ahupua‘a (watershed)...and were finally able to visit in-person once restrictions lifted, getting to explore the loko i‘a (fishpond) through stewardship, play, and art.

Telling Fish-Stories Across Oceans

We had a great time collaborating with the Mashpee Wampanoag Tribe and Waquoit Bay NERR on a distance workshop for teachers. Thanks to some experimentation we did during the pandemic, we are now able to zoom from underwater! The fish cooperated by showing us how the mākāhā or sluicegate works during the incoming tide. Our partner Paepae o He‘eia manages this 800-year old pond.

Training Future Researchers

In the summer the He‘eia NERR collaboratively piloted an intensive course on research methodologies for graduate students in the University of Hawai‘i Marine Biology program. The course combined interdisciplinary readings and discussion with Reserve-based, immersive experiences in Native Hawaiian bio-cultural restoration to introduce students to reciprocal collaboration in research. The instructional team was recently awarded an National Science Foundation grant to continue and expand the course.

"A course unlike any other I have taken in my past 14 years of teaching. I now see the value in connecting students to these sites. It has changed how I teach."

Teacher, Kahalu‘u Elementary

"It was profoundly transformational to connect to and learn from ‘āina and the stewards of those places."

Student, Marine Biology Graduate Program

Hawai‘i's He‘eia Reserve is one of 30 sites in the National Estuarine Research Reserve System. Each site is a state federal partnership that combines research, monitoring, and education to advance the understanding and management of estuarine environments.
National Estuarine Research Reserve Education
Change on the Ground in 2022

Connects
People to Estuaries

1 million+ ACRES
of natural classrooms & living laboratories with

26 INTERPRETIVE CENTERS

Hello to the Connecticut Reserve, designated in 2022!

30 RESEARCH RESERVES

296,131 VISITORS
learn about estuaries through Research Reserve outreach & education

Prepares
the Next Generation

54,773 STUDENTS
take learning out of the abstract & into the outdoors

4,347 TEACHERS
are trained in the estuary & supported in the classroom

ESTUARY SCIENCE
LOCAL DATA
LAB WORK
FIELD INVESTIGATION

SKILLS BUILT
✓ Observation
✓ Asking research questions
✓ Problem solving
✓ Data driven decision making

Improves
the Environment

10,570 CITIZENS
are trained & inspired to protect their coasts & estuaries

30 RESEARCH RESERVE EDUCATORS
lead programs that foster coastal stewardship in communities in 25 states

Creating value through education
37,371 volunteer hours = $1,119,261*

*Value of a volunteer hour is calculated at $25.00 based on data from the Independent Sector.

cost.noaa.gov/estuaries