THE REPORTER

Hands-on science at Rush Ranch

Lidia Tropeano, Solano Resource Conservation District environmental education program coordinator, speaks with a group of sixth-graders from the Dixon Montessori Charter School while she leads them on a science field trip around the Suisun Marsh at Rush Ranch. (Reporter file/Joel Rosenbaum)

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Learning by doing goes by a fancy name: Kinaesetheticism. Many educators believe this hands-on approach to learning, combined with attention and engagement, creates real emotional responses, which makes learning more memorable. When the activity is outdoors, it definitely expands the learning experience beyond the classroom and traditional teaching methods.

So that may be, in part, the philosophy behind the Solano County Resource Conservation District's annual hands-on science program bringing Solano County sixth-graders to Suisun Marsh.

This month through December, the students will spend time learning about their local watersheds and enhancing that learning through hands-on science activities in the marsh, considered the largest brackish water marsh on the West Coast and part of the San Francisco Bay tidal estuary.

Some 1,200 sixth-graders — from Vacaville, Vallejo, Dixon, Rio Vista, Benicia and Fairfield — are scheduled to participate in the program. It includes three in-class lessons led by RCD staff and a field trip to Rush Ranch Open Space, 3521 Grizzly Island Road, just south of Suisun City.

The program begins with two classroom lessons in which students learn about their watershed and the importance of keeping pollution out of stormwater by using a 3-D Enviroscape model, Shea Kinser, the RCD education program manager, said in a press statement. They also learn more about "the vital role the marsh plays in the region's ecosystem and preview what they will experience on the field trip," she added.

Owned by Solano Land Trust Rush Ranch, a property with towering eucalyptus trees, the ranch offers lessons about the importance of our region's water resources come to life through three science stations, Kinser said.

Scientists in the making, students practice collecting data to serve as evidence for questions regarding how human activities affect watershed health, she explained in the prepared statement. The sixth-graders learn about how pollution can affect water quality, then test the water in the marsh slough themselves. They learn about the two distinct environments at the marsh, then identify plants that live in the grasslands and the wetlands, as well as make observations about the soil in the two habitats and consider how drought might affect the landscape,

Diane Martin, a teacher at Hogan Middle School in Vallejo, said, "It is wonderful to see students outside enjoying nature while learning. The Suisun Marsh program enhances classroom curriculum while giving young people an appreciation for our water resources and overall environment."

Participants have noted on field trips this year that they enjoy the generally quiet space of the marsh environment and the beautiful views. Students use binoculars to look for birds and butterflies, and they spend time writing or drawing about their experiences under the shade trees.

In addition to crucial hands-on learning experiences, the field trips give students the chance to be outdoors to enjoy the natural world, said Kinser.

The final classroom lesson of the program, which takes place after the field trip, teaches students about the sources of their drinking water and reminds students of the importance of water conservation.

The curriculum for the classroom lessons and field trip meets California's Next Generation Science Standards and engage students in inquiry-based learning, notes Kinser.

“We provide students with the opportunity to see up close the open spaces and water resources they’ve been studying,” she said. “This helps them see the importance of these places as they learn to be stewards of the environment.”

The RCD’s Suisun Marsh Watershed Program is free to participating schools. The program is made possible by the Solano County Water Agency; Solano County Department of Resource Management; Vallejo Flood and Wastewater District, Solano County Orderly Growth Committee, Fairfield-Suisun Sewer District, the Vacaville Public Education Foundation, and the Benicia Valero Refinery, in partnership with Suisun Resource Conservation District.

To learn more about the Suisun Marsh Watershed Program and Solano RCD’s other education programs, visit www.solanorcd.org or email education@solanorcd.org.