YOUTH ENVIRONMENTAL EDUCATION IN MARIN COUNTY PARKS

Made possible by the Breathe/Respira & Marin County Community Grants, Measure A

OPPORTUNITY

The Environmental Action Committee of West Marin (EAC) has expanded our outdoor youth environmental education and community science program in Marin County Open Space and Parks in Fall 2018-Spring 2019 by adding seven more fieldtrips for grades 4th-12th! All schools are encouraged to apply, and classes don’t have to be science-based to participate. Transportation funding available for buses and reimbursement for parent drivers.

CURRICULUM & FIELDTRIP DESIGN

EAC’s curriculum is guide-led and is designed to teach 10-20 students to

- sharpen their observation techniques,
- recognize different habitats in geographic areas,
- learn how to use iNaturalist app to capture observations of plants and animals using smart phones or iPads (EAC can supply if necessary),
- and work in small teams to collect observations.

Field trips are held in one of three Marin County Parks (Roy’s Redwoods, Bolinas Lagoon, and Agate Beach) and activities are curated for each location based on advance site visits and focus on three distinct West Marin habitats (riparian, coastal/wetlands and terrestrial). Each outing provides first-hand experiences with nature and community science techniques using technology (iNaturalist app/smartphones/iPads) to record their plant and animal sightings. Following the field trip, EAC reaches out to the teachers and provides them with the results of their biodiversity blitz findings and other information. A post survey is also distributed at that time to see how the students responded to the program.
FIELDTRIP LOCATIONS

Roy’s Redwoods
Students begin the field trip near the open meadow where we spend time discussing observation techniques, the different trees surrounding the meadow, the types of plants and animals that would be found in the edge habitat. Following the exploration of the meadow, the group moves into the redwood and riparian habitat to learn about redwood ecology. The group breaks for lunch and team building exercises. Finally, following lunch, the students move up into the hillsides to understand hillside and edge ecology. The students focus on the different trees and birds observed on the hillsides prior to returning to the bus.

Agate Beach
Students begin the field trip at the parking lot at Agate Beach where we pause to talk about proper tide pool etiquette, safety, and the special status of Agate Beach and Duxbury Reef Marine Protected Area. Then the group descends to the tide pools and breaks into teams no more than five people and explores the reef habitat logging observations into iNaturalist with a field trip leader. Following the tide pools the group breaks for lunch on the beach and team building activities. Finally, the students will move up hillside and spend time tracking animals and learning how to identify signs and tracks from animals. The students will log additional observations of plants and animal observations along the trails above the parking lot before returning to the bus.

Bolinas Lagoon
Students begin the field trip along the pathway of the rich riparian corridor near Pine Gulch Creek. Near the creek bank, the students will break into small groups and begin searching for animal signs from skunks, raccoons, river otters, birds, and wood rats. Following the exploration of the riparian corridor, the students moves into the marsh where they will explore and document observations on the marsh plants and animals. Following the marsh exploration, the group will break for lunch and team building exercises. Finally, the students will explore the Bolinas Lagoon marsh habitat and learn about the history and conservation of Bolinas Lagoon. The students will finish the afternoon walking back along the trails collecting observations of seasonal plants and animals in iNaturalist.
SPRING 2018 RESULTS & SUCCESSES

Overview Metrics
In May and June 2018, EAC delivered four field trips to Tomales Middle School (6th and 7th grades), Lagunitas Elementary School (3rd and 4th grade), and Nicasio Middle School (6th, 7th, and 8th grades).

Student Outreach: 82 Students
Schools: 3 West Marin Schools, 4 different classes
Engagement: Reports from schools indicate 100% of the kids know how to use iNaturalist and 50% downloaded the application to their phone.
Other Partners: California Academy of Sciences Rocky Shore Intertidal Naturalists

Interest in outdoors and knowledge of different habitats
Pre-Field Trip: 50% of the students are interested in outdoor exploration
50% of the students are able to identify different habitats

Post-Field Trip: 100% of the students showed an interest in outdoor exploration
100% of the students were able identify differences in habitats
100% of the classes surveyed reviewed their iNaturalist observations
100% of the students would use iNaturalist again
50% of the students feel increased stewardship for the natural world

iNaturalist Metrics:

Roy’s Redwoods
129 Observations (Tomales Middle)

Agate Beach
64 Observations (Tomales Middle)
89 Observations (Open Classroom)
38 Observations (Nicasio)*

*Note: Technology issue where iPads did not upload the results following the Nicasio trip.
https://www.inaturalist.org/projects/roys-redwoods-tomales-middle-school?tab=observations
"I just wanted to thank you for all your hard work! I really enjoyed working with you and hope we can plan a field trip next year as well!"

- Jen Warner, Tomales Middle School
“I had a great time working with the Open Classroom kids and parents from Lagunitas School...at Agate Beach. I felt a real sense of stewardship working with them, specifically because I went to Lagunitas School and I was in the Open Classroom. One of the parents mentioned to me how thrilled she was to see that a Lagunitas kid can grow up to become a Park Ranger. Hearing her say that made my day! I also learned a ton of fascinating information about the diverse ecosystems in the tide pools from the docents.”

– Griffin Anderson, Marin County Park Ranger
https://www.inaturalist.org/projects/duxbury-reef-nicasio-middle?tab=observations