

4-H On the Wild Side
2013-14 Project Evaluation



“Look deep into nature and you will understand everything better.”
--Albert Einstein

The Issue

The United States lags behind other developed nations in science education, both in our ability to produce the scientists industry needs and a science-literate citizenry. The disparity in science is especially evident in Latino and African-American youth. 4-H On the Wild Side address these issues by bringing hand-on, inquiry-based science learning opportunities to elementary school-aged children in an engaging, real-life format. Equally important, youth from lower income communities, for many reasons, have limited access to—and experience with—the natural environment. Yet, these are the future stewards of our planet. Helping youth development an understanding of and appreciation for the environment is an investment in our young people and our world.

Project Overview

4-H On the Wild Side (OTWS) aims to enthuse and engage elementary school children in doing science and exploring and appreciating the outdoors while encouraging community involvement and developing leadership skills in teenagers. The Project is both a service learning experience for teens who plan and lead the programs, and a science education experience for elementary school-age participants.

Teenagers and their adult coaches receive training in curricula and how to teach inquiry-based science, then work in partnership to plan and deliver weekend camp programs to students attending schools in low-income neighborhoods. In 2013-14, 143 fourth through sixth grade students attended 4-H On the Wild Side—held at Camp Gold Hollow in Nevada City—where they rotated through teen-led activities to learn about the natural world and systems within it. Evaluations revealed positive outcomes including significant knowledge gain for participants, growth in leadership skills for teen presenters, and a sense of community contribution.



Population Served

4-H On the Wild Side serves Sacramento’s lowest-income communities at schools where at least 50% of students qualify for free or reduced lunches. Children attending come from schools in Twin Rivers (Hillsdale, Rio Linda Prep) and Sacramento City Unified School Districts (Cabrillo, SAC Prep, Tahoe, Golden Empire). An additional 24 teens served as teen teachers. Teen volunteers reflect the diversity of the children they work with.

Table 1: Participant demographics for 4-H On the Wild Side Project in 2013-14

	Elementary Students (n=346)	Teen Teachers (n=48)	Adult Support (n=70)	Total
Ethnicity				
Caucasian	30	5	22	57
African American	24	2	4	30
American Indian	2	0	0	2
Asian	15	3	8	26
Pacific Islander	0	0	0	0
Hispanic	61	9	7	77
Other	11	5	5	21
	143	24	46	213
Gender				
Female	89	22	29	268
Male	54	2	17	196

Program Impact

Learning about the natural world: Elementary students attending 4-H OTWS take a test prior to, and at the end of camp, to measure how much they learned as a result of their experience. This year’s data—as in years past—demonstrates students make significant gains in knowledge (p=.00). Comments from student journals support this finding as well.



“(Trees) have lots of parts, just like humans...”

--4-H Wild Side camper

“Trees give off oxygen. They also take in CO2 or carbon dioxide to make oxygen.”

--4-H Wild Side camper

“Looking through the water trying to find things with our naked eye. We saw the water with a magnifying glass and saw bugs...”

--4-H Wild Side camper

Graph 1: Mean pre-test and post-test scores for the total sample of 4-H On the Wild Side participants

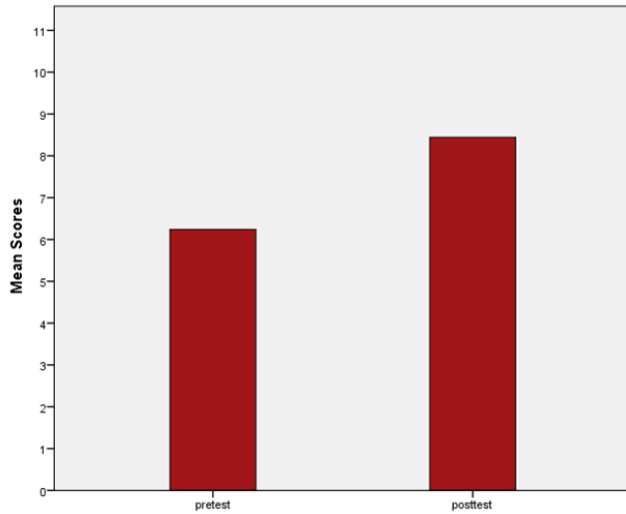


Table 2: Means, standard deviation, and number for total sample

	Pretest	Posttest
Means	6.24	8.44
Std. Deviations	2.07	2.05
N	138	138

Graph 2: Mean pre-test and post-test scores for the six sites participating in the 4-H On the Wild Side project

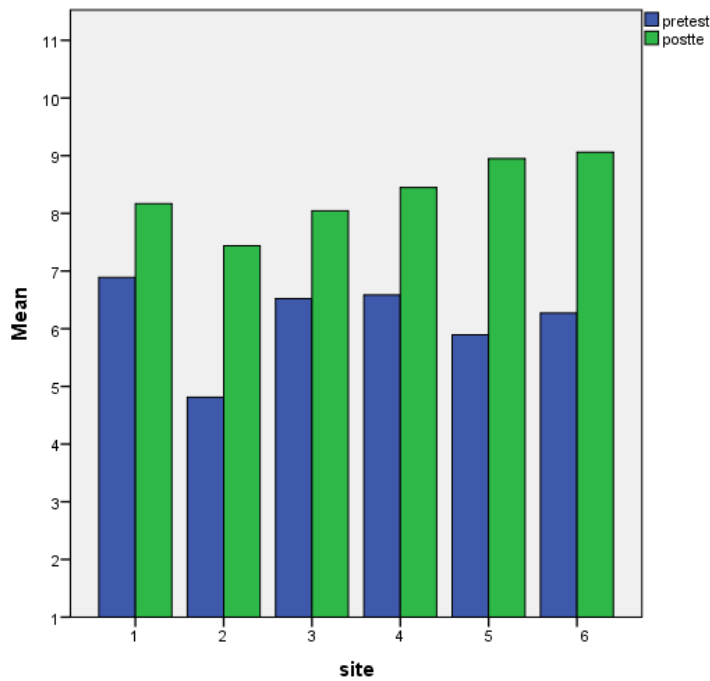


Table 3: Means for sites

Site	Pretest	Posttest	Difference
1 n=18	6.89	8.17	1.28
2 n=16	4.81	7.43	2.62
3 n=23	6.52	8.04	1.52
4 n=29	6.58	8.44	1.86
5 n=19	5.89	8.94	3.05
6 n=33	6.27	9.06	2.79

Creating positive feelings about science and the environment: Enjoying nature and science are goals in 4-H On the Wild Side and the program is popular with youth. Almost all campers rated the program as good or (most students) excellent. Some of the students' journal entries capture the excitement they felt doing things for the first time: paddling a canoe, sleeping outside, being away at camp with their classmates and teacher.



“During canoeing I experienced the Turtle Rock. It was really smooth and looked like a turtle. I also experience that it takes a lot of teamwork. I really like canoeing...”
--4-H Wild Side camper



“Over the weekend I really like how the trees and stars looked at night. I liked the sound of the owls. I liked all the activities, they were really fun...”
--4-H Wild Side camper

“Everything was very awesome. It was the best camping trip ever. I wish I could stay longer. We went to 6 or 5 different stations. Canoeing was very cool. Camping is cooler than my world.”
--4-H Wild Side camper



“Yesterday was fun. We sang camp songs and made wish boats. We ate spaghetti and a nice salad.”
--4-H Wild Side camper

“I learned to bring warm clothes at night or you're going to freeze. I had so much fun and I want to come here next time.”
--4-H Wild Side camper

Building leadership skills and self-awareness: The participatory nature of 4-H lends itself developing a plethora of important life skills. In 4-H On the Wild Side, teens experienced the process of teaching, became role models for the children, and developed organization, communication and leadership skills. In a retrospective pre-post survey, teens indicated that they grew in confidence speaking publicly and practice problem solving. Seventy-nine percent of teens reported increased confidence in making a presentation, and 85% felt they were better at both organizing their time and working with younger children.

“Work as a team. Always stay positive.”

--4-H YES teen teacher

“I’ve always been very quiet and I still am but this event helped me to understand others and myself...”

--4-H OTWS teen teacher

“OTWS has taught me so much. I think it’s especially improved my public speaking skills and made me more comfortable around new people.”

--4-H OTWS teen teacher



Developing a sense of service: Helping young people understand issues in their community and their responsibility to contribute to solutions is central to 4-H’s mission. Eighty-nine percent of teens volunteering in 4-H On the Wild Side felt that they made an important contribution to their community through the project.



“I think I have really grown in understanding others, in interacting with different age groups, with adults, people my age and kids younger than me...”

--4-H OTWS teen teacher

Community Collaborations

4-H On the Wild Side is developed and delivered by the Sacramento County 4-H Youth Development Program, part of the University of California Cooperative Extension. 4-H enjoys strong partnerships with the following community organizations in delivering 4-H On the Wild Side:

Organization	Role
California State University, Sacramento --Science Education Equity Program --Department of Biological Science	Leadership to the On the Wild Side Program Development Committee; student volunteers who serve as coaches to teens; facility for training day.
Sacramento START after school program	Adult program leaders who are trained as YES coaches; students at their sites to receive program.
Sacramento City and Twin Rivers school districts	Teachers who coordinate 4-H OTWS trips and volunteer their time to attend with their students.
Arata Brothers Foundation	Financial support.
State Street	Financial support.