



University of California

Agriculture and Natural Resources | 4-H Youth Development Program

4

4-H On the Wild Side 2014-15 Final Report

Marianne Bird and Aarti Subramaniam
University of California Cooperative Extension
(mbird@ucanr.edu)

For 16 years, 4-H On the Wild Side has provided avenues to learning and appreciation of the outdoor world for young people, most of whom have never slept under the stars. The program's well-documented impacts speak to the power of the experience to enhance knowledge, build skills, and provide a meaningful sense of service.

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 2014-15, 139 fourth through sixth grade students attended the program—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. This year's two camps took place May 29-31 and June 5-7. Evaluations revealed positive outcomes including significant knowledge gain for participants, growth in leadership skills for teen presenters, and a sense of community contribution.



“(What meant most to me) was the aspect of the counselors spending time with the campers and making an impact on their lives.”

--OTWS Teen Teacher

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. Elementary school students attended schools in South Sacramento, Rosemont, Rio Linda and Rancho Cordova, and 68% of youth were non-white. Teen volunteers reflect the diversity of the children they work with. This year’s number of teen teachers was small, indicating a need for a focused recruitment this coming year.

Table 1: Participant demographics for 2014-15 4-H On the Wild Side Project

Ethnicity	Elementary Students (n=139)	Teen Teachers (n=13)	Adult Support (n=22)	Total	Percent
Caucasian	38	6	12	56	32
African American	26	2	2	30	17
American Indian	2	0	0	2	1
Asian	21	3	3	27	16
Pacific Islander	1	0	1	2	1
Hispanic	44	2	4	50	29
Other	7	0	0	7	4
Total	139	13	22	174	100
Gender					
Female	86	11	12	109	63
Male	53	2	10	65	37

Evaluation Results

The evaluation measured knowledge gain and attitudes about science and the environment in elementary school-aged children. It also measured leadership skills and confidence in teen teachers, and enjoyment and satisfaction with the experience. To measure learning and the student experience, assessment methods included pre- and post-tests and an end-of-camp survey for elementary school students. The teen assessment featured a staff survey administered at the end of the camp weekends, and a group project evaluation (akin to a focus group) conducted at conclusion of the experience. Adult coaches who worked with the teens also completed the staff survey, and the school teachers and chaperones who attended camp with their students completed the end-of-camp survey.



Learning about the natural world: Pre- and post-test scores demonstrate students made significant gains in knowledge. Graph 1 illustrates the average test scores for participants before and after attending 4-H OTWS camp. Comments from student journals support this finding as well. The increased scores indicate growth in vocabulary (e.g. habitat), knowledge of scientific tools (e.g. hydrometer, ph.), and understanding environmental concepts (e.g. interdependence, adaptation). Consistent with previous years, this year’s data show significant increase ($p=.05$) between scores, indicating students learned important information about the natural world and systems within it.

Graph 1: Mean pre-test and post-test scores for 2015 4-H On the Wild Side participants

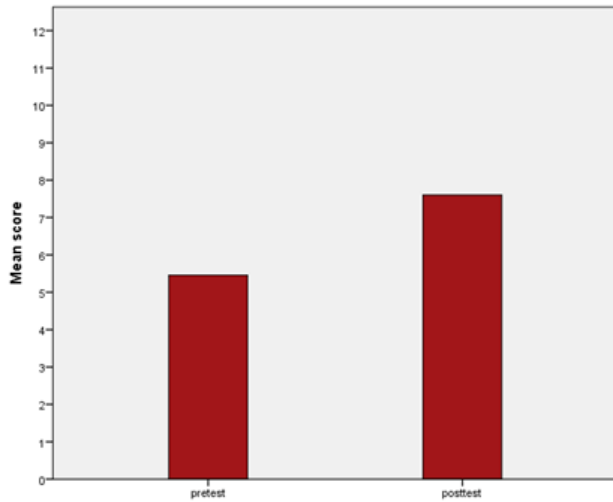


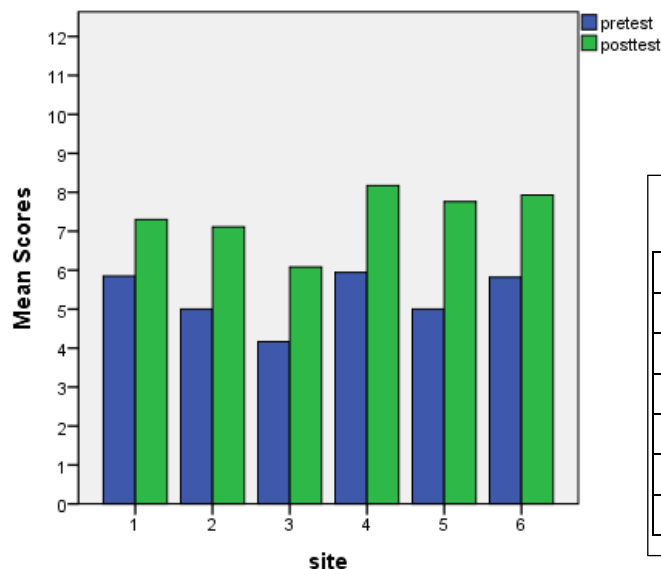
Table 2: Means, standard deviation, and number of students for 2015 4-H On the Wild Side pre- and post-test scores

	Pretest	Posttest
Means	5.46	7.60
Std. Deviations	2.14	2.54
N	138	138

“I learned that our students have little background knowledge about nature.”

--Teacher who attended with her sixth grade students

Graph 2: Mean pre-test and post-test scores for 2015 On the Wild Side by school site.



All six schools attending the program recognized these gains. Graph 2 illustrates the pre- and post-test scores by school. Changes in scores were significant at the $p=.00$ level for all sites except site 3 where $p=.01$

Table 2: Means of pre and post-test scores by site

	N	Pretest	Posttest	Δ
Site 1	20	5.85	7.30	1.45
Site 2	18	5.00	7.11	2.11
Site 3	12	4.17	6.08	1.91
Site 4	35	5.94	8.17	2.22
Site 5	25	5.00	7.76	2.76
Site 6	28	5.82	7.92	2.10



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 indicated a positive experience as 81% rated camp as excellent and 16% said it was good. While 97% of youth reported a positive experience, 3% rated the experience as fair or poor. This may be a result of the outdoor or community living experience that required sleeping outside and more primitive facilities than what students may be used to. Not everyone enjoys camping.

“When I went canoeing it was amazing...I got to see lily pads and it was cool. I heard birds chirping and got to see inside of the water out in the middle. It was the best time.”

--On the Wild Side camper

“My experience was super cool, I did plenty of things. Some of them were canoeing, get in touch with trees, and Hooks and Ladders. I also loved it for the first time, especially the energy. Campfire was also great. I admired the sleeping in the wild too. FYI the greatest camp.”

--On the Wild Side camper

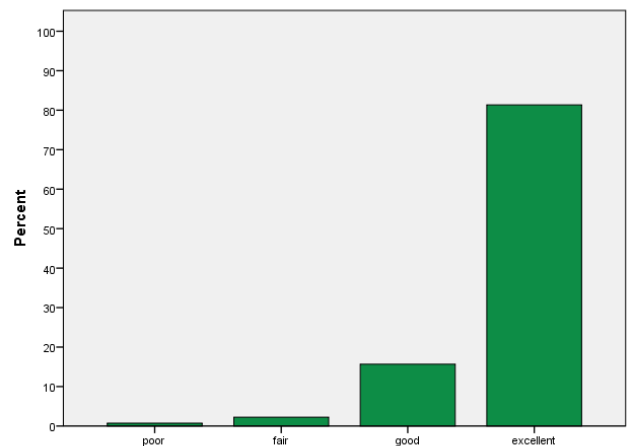
“The best part of camp was hearing the campers say, ‘This was the best thing ever.’”

--School teacher attending with her students

“In ninth grade I want to work at camp Gold Hollow, I really loved to spend time with you. It was really fun thanks for letting us come and camp...”

--On the Wild Side camper

Graph 3: Student ratings of their experience: poor, fair, good, and excellent.





Developing skills in teens: The project-based work in 4-H naturally leads to developing important skills for life. In addition to planning and delivering their lessons for camp, 4-H On the Wild Side teens work in partnership with adults on the Program Development Committee to meet the funding, training, and recruitment needs of the program. Teens are seen as resources in all aspects of program development and played key roles in writing grant proposals, approving the budget, recruiting program staff, and presenting at project meetings and training sessions.

Surveys at the conclusion of the On the Wild Side programs ask teens to assess their growth in a number of areas: public speaking and making presentations, sharing their ideas with adults or other teens, and organizational skills. Teens in OTWS reported increased organizational skills (85%) and

confidence in making presentations (54%). All teens (100%) strongly agreed that the project gave them the chance to work with people of different backgrounds, cultures and abilities.

Teens feel a sense of responsibility and empowerment in their jobs, and their sense of contribution to community grows.

Developing a sense of service: Helping young people understand issues in their community—and their responsibility to contribute to solutions—is central to the 4-H mission. Many teens come to OTWS seeking service hours to fulfill high school graduation requirements. Others are looking for ways to be involved in activities outside school, or participate because they care about the environment or want to work with children. Regardless of their reason for joining, all teens (100%) felt as though they had made an important contribution to their community through the project. The high retention rate of teens returning to the program from one year to the next indicates they feel their role is meaningful and that they enjoy the experience.

“I have discovered I like teaching and working with kids. This program has taught me that I want to be a teacher.”

--OTWS Teen Teacher



Media Teams Document Program Process and Impact

This year two groups asked to document 4-H On the Wild Side camp. Weekend one brought a film crew from **Click2Science**, an online professional development resource developed through the University of Nebraska in partnership with the NOYCE Foundation, to support out-of-school providers working in the areas of science, technology, engineering and mathematics. The film crew's interest included filming teen staff in their empowered roles as educators; how adult coaches encourage teen reflection and provide feedback; and how the activities and atmosphere at the camp encourage elementary school students to see themselves as scientists. The segments are being edited and will appear in Click2Science training modules found at <http://www.click2sciencepd.org/>.



Because 4-H On the Wild Side received a GABY grant this year, a film team supported by the **Grants Advisory Board for Youth (GABY)** visited the second camp weekend and documented the teen and camper experience. The crew interviewed teens, adult volunteers, and school teachers who brought their students. We hope to see their edited work soon.

Community Partnerships

Strong community partners fortify 4-H On the Wild Side. These partnerships provide people-power, community resources, and connection to students. The Program Development Board that provides



leadership to OTWS includes many of our program partners. Partnerships include California State University, Sacramento (program leadership; student volunteers and mentors; facilities); Sacramento City, Twin Rivers and Folsom Cordova school districts (students and teachers who attend camp); and our financial partners: Arata Brothers Trust, State Street, the California 4-H Foundation, and the Sacramento Community Regional Foundation's Grants Advisory Board for Youth (GABY).