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4-H On the Wild Side

Abstract

4-H On the Wild Side aims to enthuse and educate elementary school children about nature and the outdoors, and encourage community involvement and activism in teenagers. It is both a service learning experience for teens who plan and lead the program, and an environmental education experience for elementary school-age participants. Over several months, teen staff work in partnership with adult volunteers to orchestrate and deliver weekend camp programs to 4th, 5th, and 6th grade students attending schools in low-income neighborhoods. Teens receive training in environmental curricula and in teaching inquiry-based science, then design and deliver two weekend programs. Up to 80 children attend each session, rotating through the teen-led activities to learn about ecosystems, migration, habitat and other environmental lessons. Since 2000, over 1,500 youth have participated. Annual evaluations reveal consistent outcomes for the program including significant knowledge gain for participants, growth in leadership skills for teen presenters, and a sense of community contribution.

Program Needs

The purpose of On the Wild Side is to expand outdoor learning and wilderness opportunities for youth who would otherwise not likely have access to the natural environment. Many children today, especially those from urban, economically disadvantaged communities, have not had the opportunity to experience and understand nature. Yet, these children are the stewards of our future and the ecological health of our planet.

Targeted Audience

4-H On the Wild Side serves two audiences:

1. *Elementary students in grades 4-6:* Approximately 130 children from low-income neighborhoods participate in one of two weekend programs. At least 50% of students qualify for free or reduced lunches at our partnership schools. Seventy-five percent are ethnic and racial minorities and few, if any, have had the opportunity for wilderness experiences.
2. *Teenage volunteers:* Twenty teenage volunteers, some from the 4-H Club but most recruited from the community, lead the effort. Over 40% of teens are non-white.

Program Goals and Objectives

Since 2000, On the Wild Side has brought environmental education and outdoor living experiences to over 1,500 youth from Sacramento's most economically disadvantaged neighborhoods. Project goals for the children participating include:



- Expanded knowledge of the natural world and systems within it.
- The development of an enthusiasm for nature and outdoor living experiences.
- An appreciation for the importance of conservation and environmental stewardship.
- A fun, positive experience with peers and staff in the outdoor setting.

In addition, teens involved as project planners and leaders are expected to gain:

- Understanding and application of SET Abilities in teaching science activities.
- Skills and confidence in program planning and delivery.
- An increased awareness of the importance of civic engagement.
- Feelings of satisfaction and pride in successful project completion.

Program Design/Curricula and Materials

4-H On the Wild Side utilizes tested curricula from which the teen staff choose their lessons. Material is drawn from different resources depending on the program's focus, which changes from year to year.

Curricula used includes *Project Wild*, *Project Wild Aquatic*, and *Project WET* (Council for Environmental Education); *Project Learning Tree* (American Forest Foundation); *Junior Master Gardener*® (Texas Agricultural and Extension Service), *SERIES—Nature's Partners: Pollinator Protection*, and *Oak Woodland Wildlife* (University of California Agriculture and Natural Resources), *Water Inspectors* and *Wetland Protectors* (California Aquatic Science Education Consortium and University of California Agriculture and Natural Resources).

Knowledge and Research Base

4-H On the Wild Side emphasizes experiential and inquiry based learning in areas of environmental science, cross-age teaching and youth adult partnerships.

Experiential learning is the process of creating knowledge through the transformation of experience (Kolb, 1984). It involves a direct encounter with the phenomenon being studied. Components of experiential learning (often called the experiential learning cycle) include a concrete experience, observation, reflection, generalization of abstract concepts, and application (Kolb, 1984). Environmental education concepts lend themselves especially well to experiential learning. In *On the Wild Side*, children spend a weekend immersed in the natural setting— sleeping under the stars, exploring the lake, listening to frogs at night – and all these provide an essential backdrop to both the cognitive and affective components of learning. Curiosity about the environment, and subsequent exploration, invite youth to discover and build understanding. Activities also incorporate inquiry based methods where learners are not handed correct answers but, through an active process, discover the answer themselves. There is evidence that African American youth and other youth from non-white ethnic communities learn better with inquiry based approaches (Hmelo-Silver, et al, 2007, Lynch et al, 2005).

Cross-age teaching, where teenagers instruct younger children, has received merit as a promising strategy for engaging elementary age students. There is evidence that teens can have a positive impact on the knowledge,

behavior and attitudes of younger children (Meyer et al, 2000). Teens are natural role models for younger children who are eager to emulate them (Bandura, 1977). In addition, engaging teens in leadership roles benefits teens as well. Some reported benefits include learning to be more organized, responsible, and involved in positive change in their community (Hoover & Weisenback, 1999). Teens that volunteer for On the Wild Side are a diverse group. This helps build connection with elementary students who are from similar social and ethnic communities.

Youth adult partnerships are relationships between young people and adults where there is mutuality in teaching, learning and action (Zeldin, McDaniel, Topitzes & Lorens, 2001). Young people's voice, influence and decision-making are on par with adults. In On the Wild Side, teens are trained in experiential and inquiry methods and then have full ownership over the planning and decision-making to develop their lessons and activities, supported by adult guidance. Adult program staff intentionally practice strategies that characterize effective youth adult partnerships – creating non-hierarchical structures for equal participation of youth and adults, practicing respectful communication, and valuing young people's contribution to the process. Youth and adults build the project together to serve an authentic community need (Camino, 2000).

Partners

On the Wild Side began as a collaborative endeavor between 4-H, Camp Fire Boys and Girls, the Sierra Club, and the City of Sacramento START afterschool program. Over the years some players have changed, but the essence of true partnership remains constant: all players are invited to fully participate in the creation of program experience, and the gifts and needs of each organization are valued and met.

Current project collaborators include:

- Afterschool programs, and elementary and charter schools—provide students to attend the program and financial support.
- Sacramento County 4-H Youth Development Program—provides leadership, training, program management and financial support.
- California State University Sacramento (CSUS), Science Education Equity Program—provides adult volunteers, technical support in science education, and financial support.
- University of California 4-H Center for Youth Development—provides assistance with program evaluation.

Funding

On the Wild Side draws its financial support from fees, grants, and donations. Not counting the cost of the 4-H staff who organize the project or the teachers and afterschool program leaders who attend with their children, the project budget runs between \$8,500 and \$9,500 annually. This includes camp rental, food, program supplies and bus transportation. Schools and afterschool programs pay a modest fee (\$300 per 20 students) to participate. Local 4-H and community grants cover about one-third of the cost, and the balance comes from donations from service groups, individuals, and businesses. Teens are engaged in identifying funding sources, grant writing, and making presentations to community groups. The funding sources vary from year to year, but the project has never struggled to find financial support.





Staffing

A primary reason the program budget is comparatively small is the large volunteer force that powers On the Wild Side. Though a 4-H staff member supports program planning and delivery, the cooks, lifeguards, nurses, teen counselors, adult coaches and chaperones are all volunteers.

A “core team” of experienced teens and adults meets in the fall and oversees the program administration (budget, funding, training, recruitment). Program volunteers are recruited primarily through word of mouth, postings at high schools and CSUS, and, to fill skill-specific positions like nurse, by invitation. Teens and adult volunteers who serve as camp staff are often new to 4-H, and have heard about the project in seeking service opportunities. Many identify us through their school or the internet in their quest for community engagement opportunities. Teens work in teams to deliver the program. Adult volunteers are matched with the teen teams and serve as coaches.

Beginning in February, the teens and adult program staff attend monthly meetings where they plan the session they will deliver at camp. Additionally, the staff attends a day-long Saturday training and a weekend retreat at camp where they practice delivering their session to peers. Training includes sessions on inquiry-based science, age characteristics of 4th-6th graders, and teambuilding activities.

Program Delivery

Two On the Wild Side weekend camping experiences happen in late May or early June. Sixty to seventy 4th, 5th, and 6th grade children from the Sacramento area attend each session with their classes or afterschool programs. Participants rotate through the teen-led activities to learn about different topics.

Participants come from school and after school sites, most from the city of Sacramento. A few weeks prior to the camp, program administrators visit the sites to deliver an informational meeting for students, staff and parents. Participants and their parents see photos of the facility, learn what to expect, and have an opportunity to ask questions. Adults, usually teachers and after school program staff, attend camp with their students.

Participants arrive by bus Saturday morning. They sleep outside on decks, and teenagers are assigned to each living group (denoted by school site and gender). On Saturday afternoon and Sunday morning participants rotate through six teen-led learning sessions focusing on topics like ecosystems, migration, habitat or water properties. Activities may include games, simulations, observations, and exploration. Teen teachers are coached not to “tell” information to students, but to allow the children to make discoveries on their own. As much as possible, activities are designed to allow participants not to *learn* about science, but to *become* scientist themselves. For example, one popular activity involves exploring living organisms in the lake: Using nets and buckets to collect specimens, examining with hand lenses or dissecting scopes, and drawing and identifying what is found. Another example of student-scientist activities included a study of the lake water and using instruments to measure turbidity, temperature, pH, salinity, and microorganisms.

Participants also have the opportunity to paddle a canoe, sing around a campfire, and fall asleep under the stars. The evening includes a campfire, songs and skits, and evening program. The participants leave Sunday afternoon.

Recognition of Participants

Teen and adult staff celebrate their accomplishment at an ice cream parlor following their program evaluation, a week or two after the last camp weekend. Thank you notes, letters of recommendation, and occasionally invitations to present at conferences and community events are other forms of volunteer recognition.

Program Evaluation and Outcomes/Impact

Since it began in 2000, On the Wild Side has been evaluated annually. The evaluation examines the following program objectives:

- significant increase in knowledge of environmental concepts for participants,
- positive attitude and enthusiasm for the natural world for participants,
- significant change in life skills, leadership and/or sense of contribution to the community for teens, and
- enjoyment of the experience for all participants.

A compilation of 10 year's data for the project is complete and in press, soon to be released in *Advances in Youth Development: Research and Evaluation from the University of California Cooperative Extension (2001-2010)*, a University of California publication.

Methods

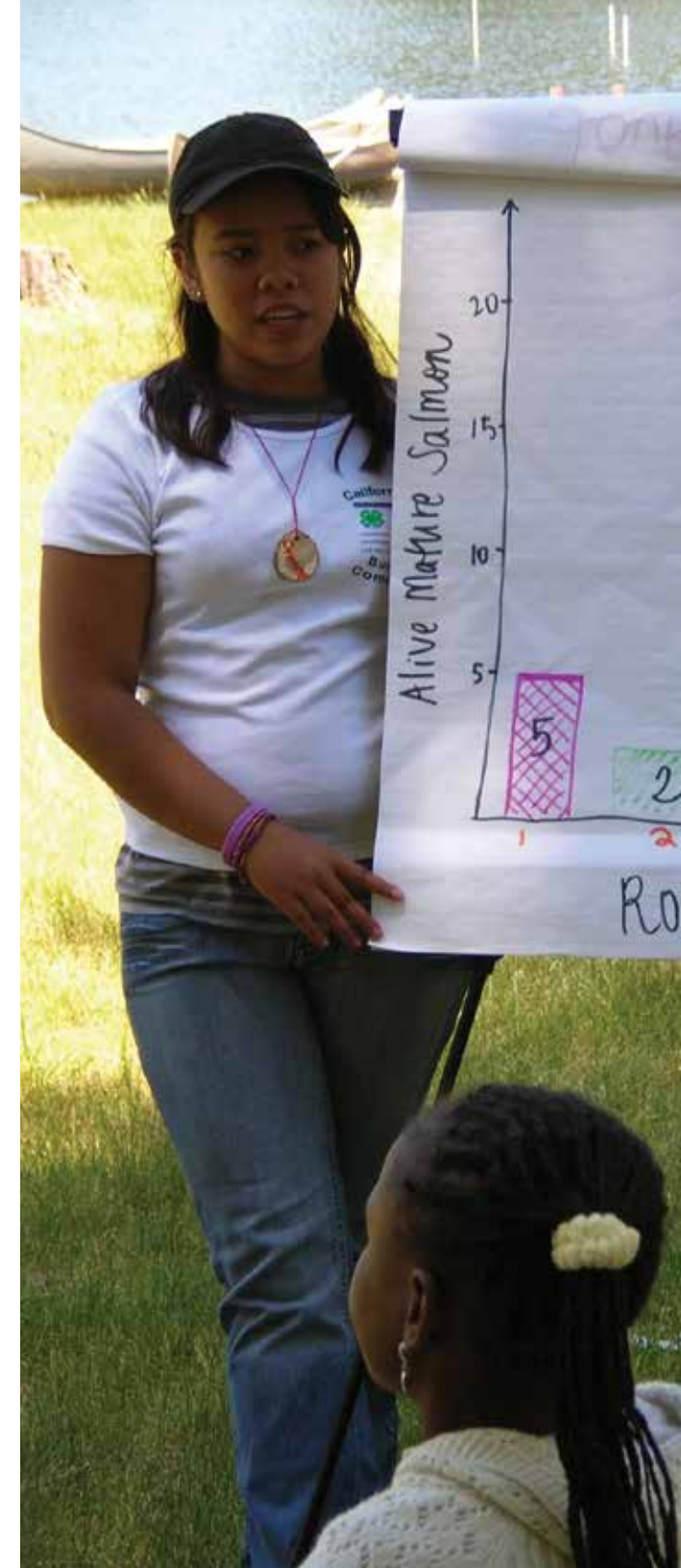
Data for the evaluation were collected through several means. To measure student learning, a multiple choice/short answer test is designed around the lessons teens present at camp. Students take the pre-test prior to arriving at camp, the post-test just before departure, and the matched pairs are compared with paired samples t-tests in SPSS. Participants reflect on their learning in journals, and these are collected and also inform the evaluation. At the end of camp, students and adult chaperones fill out a survey where they rate their experience, share highlights and suggestions for improvement, and what they have learned.

To measure the impact on teen leaders, youth staff members take an anonymous survey at the conclusion of the program to rate, on a five-point Likert scale, their relationships with adults, their environmental awareness, and their sense of contribution. A retrospective pre-post test also asks them to assess their leadership skills (making presentations, sharing opinions with peers and adults, organizational skills, working with younger youth) before and after their experience. Open-ended questions on the survey provide qualitative data about the teens' experience. In some years, focus groups with teen, adults, and program partners provided more in-depth information on youth-adult partnership, personal growth, and their feelings about the project.

Findings

The data consistently show that participants gain knowledge about the environment. Each year there is a significant difference in the participant's pre-and post-test scores. The students' journals reflected learning, especially through direct experience.

I learned about the prey and predator and that a bird is both—they eat worms and we eat them.





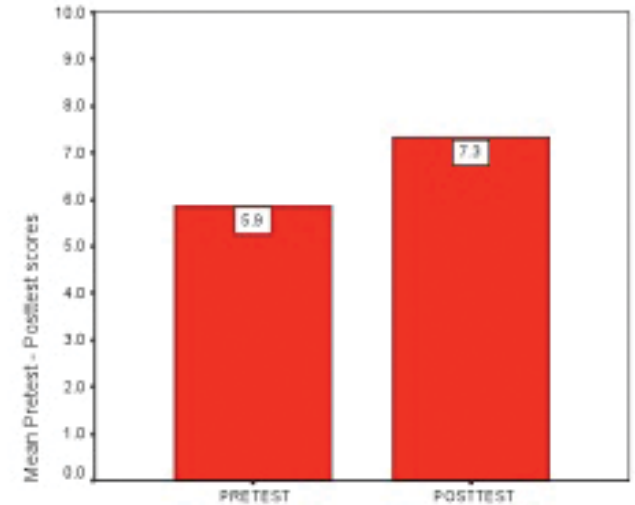
I learned that mosquitoes were born in water.

You can find a lot of snails in the water. You can find dead skin, snails, frogs, and worms and even fries, which is baby fish that just was born.

A madrone tree is smooth and cold.

Discoveries include both affective and cognitive elements and appear to be born of first-hand observations as participants explore the environment through both structured and unstructured activities.

Figure 1: Five years of pre- and post-test scores for elementary school participants (n=514). The difference is significant at (p =.00) level.



Participants engage with the natural world. For many students, the program creates opportunities to explore and encounter nature in ways they have not before. For each year, an average of 60% of children reported that this was their first outdoor living experience. The end-of-camp survey and student journals reveal a litany of first-time experiences for children: Seeing bats, sleeping outside, looking for bugs, paddling a canoe, seeing shooting stars or the Milky Way, swimming in a lake, finding lizards, feeling the campfire, among others. For some, the new environment created feelings of trepidation, and as these were overcome, a sense of accomplishment accompanied mastered challenges.

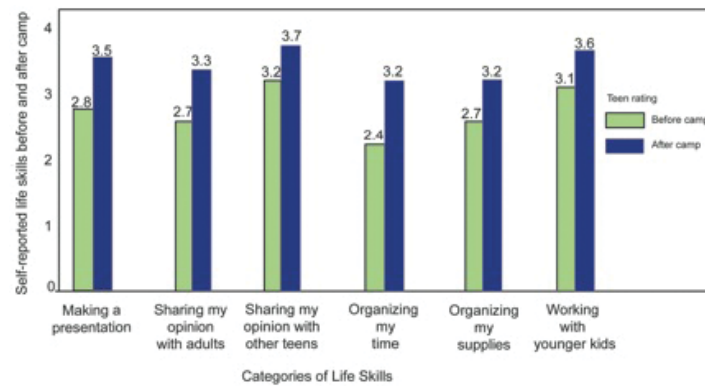
We had so much fun at canoeing. I think we were the best at backing up. I was with Scott and this boy named Jordan. We had the funnest [sic] time. At first we were a little scared. We all were. But I liked it in the end.

—5th grade participant

The newness of the experience can raise anxiety for some participants, and not all embraced the rustic environment. However, nearly all participants (an average of 96% for all years) rated their experience as excellent or good. Students repeatedly stated on surveys that the program could be improved by making it longer.

Teens grow in leadership skills. The retrospective pre-post test indicates teens perceive growth in making a presentation, sharing their opinions with adults, sharing their opinions with teens, organizing their time, organizing supplies and working with others.

Figure 2: Teens self-reported life skills before and after camp



When teens reflected on how they changed through the experience, four themes arose: personal growth, changes in their perception, a sense of efficacy, and skill development. Over 40% of teens listed gaining tangible skills, including working with children and speaking in front of others.

I've become a more responsible, flexible and compassionate leader. Plus, I've learned more about nature through teaching than I could have ever learned in a classroom.

Journal entries and observations verified that each time they taught their lesson, the session improved in content and efficiency, and their confidence as presenters grew.

Teens feel that they contribute to their community. A teen staff position requires a significant time commitment. The vast majority (99%) of teens felt as though they made an important contribution in their community through the project.

I feel like a more important person for having given the kids that opportunity and making everyone's day. I feel great after every weekend, knowing I've helped make memories . . .

Evidence of Sustainability

On the Wild Side has run every year since 2000. As mentioned above, the large volunteer base that leads and supports the effort is a pivotal part of its longevity. Many staff have great ownership and dedication to the project. Programs and schools that attend look forward to returning and are committed to helping financially.

Awards or Other Recognition Received for the Program

4-H On the Wild Side was a Blue Cross Community Service Honoree. It has been featured at a national CYFAR (Children, Youth and Families at Risk) conference and at the American Camp Association Research Symposium.

Considerations for Replication

This type of project lends itself well to reaching new teen audiences. The program has not found it difficult to recruit teens (and young adults) to serve as camp staff. Most are new to 4-H. The project has many elements that appeal to them: working with friends, meaningful leadership roles, authority, and a fun setting.

Multiple funding sources provide sustainability. The teachers and afterschool programs who participate are eager to bring this type of fun, engaging learning experience to their students and are willing to find funds to make it happen. Teens are effective presenters to service organizations and other funders.





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