

NNREC Framework for Environmental Education Professional Development

This document outlines the Nevada Natural Resource Education Council's (NNREC) thoughts and intents about professional development. As part of its current initiative to develop five-year strategic plan, NNREC will develop a statewide environmental education professional development plan. It is expected that completion of the strategic plan will influence both this document and the professional development plan, and that this document will influence the strategic plan. NNREC is seeking EETAP funding under the Building Capacity for State EE activity, which requires the development of a statewide training plan.

The framework uses the term **environmental education**. Other related terms include natural resource education, earth education, place-based education, place-based learning, place-based service-learning, project-based learning, service-learning, education about the environment, education for sustainability, education for sustainable development, and many others. We recognize that each of these terms makes valid distinctions that emphasize different strengths within the entire field of endeavor. We accept the use of all such terms as describing activities and approaches which support our organizational mission, and we will work effectively with organizations which use these different terms. The framework uses the term **professional development** to describe activities which develop an educator's content knowledge and skills. EETAP uses the term training.

Two activities are currently underway which will strongly affect the context in which NNREC works. These are the Nevada Department of Wildlife (NDOW) 10-year Wildlife Education Plan and the Partners for Education about the Environment (EAE) effort going on in southern Nevada. NNREC will actively participate in both of these efforts, both to influence them and to enlighten and ground our own approach.

This framework addresses our premises, our role, components to be implemented, resources that we use to design our approach, potential programs, and partners.

Premises

NNREC believes that:

1. Development of an environmentally literate and active citizenry is a core objective of education, along with academic content and skills. An overemphasis on academic goals, as is currently happening under the No Child Left Behind act, can be destructive of students, communities and environment if not balanced with the civic engagement mission of education.
2. Scripted reading programs preclude curriculum integration by occupying much of the school day with materials that are largely devoid of content rather than following the research-supported model of using content from all subject areas as reading material in order to motivate students to develop a reading proficiency. Nevertheless, this instructionally unsound practice is in use at many schools with at-risk, lower income and English language learners. These programs should be removed from schools and replaced with effective education models that teach reading in the content areas rather than in place of content.
3. The focus on reading and math to the near exclusion of other subject areas including arts, social studies and science has harmed the education of our children, and in particular has had a devastating effect on education provided to lower income and English language learners.

Schools must return to the broad-based curriculum that has proven effective in developing academically successful citizens over our history.

4. All students deserve and require experiences in their community and natural environment at all grade levels. Schoolyard activities such as gardens and habitats, field trips to natural areas and community resources, and service-learning projects which use student knowledge and skills to solve real community issues are all critical components of effective education.
5. School-wide, district-wide, and state-wide programs are more effective than the activities of individual classrooms, though the implementation of programs will and should vary according to the local environment, community and student population. We recognize that the commitment and creativity of individual teachers with their own students has and will continue to provide a model for larger contexts.
6. Strong participation by the Nevada Department of Education is critical to the implementation of effective programs in the schools.
7. The “projects” are an excellent entry point into environmental education for both formal and nonformal educators, but are not an end in themselves. Educators also need in-depth professional development in carefully designed programs which build on these entry points, in order to implement and integrate environmental education into all contexts.
8. Effective education, not just in environmental education but in all areas, includes integration of subjects, team teaching, student choice, use of skills in real world situations, meeting standards as a whole rather than in isolation, involvement in the community, and motivation.

NNREC Role

NNREC has a prominent role in providing professional development to educators within Nevada, working as a partner with schools, higher education, agencies, organizations, businesses and individuals.

1. NNREC will provide a strong voice, advocacy and education in the values to be obtained both for our education system and our society of including environmental education topics and pedagogy in all educational settings.
2. NNREC will actively work in the instructional areas where the missions of the agencies, organizations and businesses overlap with the educational mission of schools. We feel that other organizations and agencies can effectively offer services where missions do not overlap. In particular, NNREC will defer interpretive training for nonformal educators who work with the public to the land and resource management agencies, and to organizations such as the National Association for Interpretation.
3. NNREC will offer professional development that effectively meets the needs of grade levels or entire schools, will encourage the participation of educators as mentors for others in their school, organization or agency, so as to multiply the effects of what we offer, and will provide discounts for such participation.
4. NNREC will continue to be the major partner with Nevada Division of Forestry in presenting Project Learning Tree workshops for teachers, instructors of pre-service teachers, and nonformal educators. A sufficient number of workshops will be offered in all the geographic parts of the state so that every educator has at least one chance to participate in a workshop per year. NNREC will support agencies, organizations and schools in offering Project WET, Project WILD and Project Archaeology workshops, but will not be a lead partner for these workshops.
5. NNREC will ensure that all educators in the state are aware of professional development opportunities offered by any entity by providing an online professional development calendar.

6. NNREC will identify gaps in the professional development opportunities available, and work with partners to fill these gaps, either in a lead or supporting role. In particular, we will work with the districts, the Regional Professional Development Programs, and higher education to create and promote a comprehensive professional development program for Nevada.
7. NNREC will work closely with the Nevada Department of Education to garner their support participation and leadership in efforts to implement environmental education in the K-12 system.
8. NNREC will not develop, fund the development of, or participate in the development of new curriculum. It will, however, participate in or lead the adaptation of existing high quality curriculum for Nevada environments, communities and issues.
9. NNREC will not be a direct provider of education to students or the public, except where participation in such activities assists us in our professional development program by increasing our experience of and knowledge of current educational practice and challenges in the classroom, schoolyard, community and natural environment.

Components

NNREC will implement Components of a State-Level Comprehensive EE Program with the following components and activities. These are listed in priority order, though of course many of the components will be active at the same time, and priorities will shift according to the needs of the educator community and availability of funding. It is expected that the process of developing an Environmental Education Professional Development Plan will result in changes to the components, the details, and the priority order.

1. State EE Association: NNREC will continue and enhance our role as a leader for environmental education in Nevada. Specific activities will include publicity for successful environmental education programs and projects, outreach education to increase the understanding among agencies, organizations, schools and businesses about the role of NNREC, increased membership from amongst the environmental education community, and stable funding.
2. Coordinated Teacher Inservice Programs *and* EE Training for Nonformal Educators: NNREC will offer and support summer institutes for all educators that provide in-depth professional development designed to transform school practice (in the classroom, on the schoolyard and in the community and natural environment). We believe that workshops that include both teachers and nonformal educators generate a greater impact through networking and partnership building. Since NNREC has only partial expertise in this area, it will work with faculty at higher education institutions and professional development staff in the districts and RPDPs to design these programs. We expect that we might bring in out-of-state experts to provide some workshops for which there does not seem to be in-state expertise. NNREC will develop a recommended series of opportunities that build on one another and will publicize this series. In the future, this may lead to a formal certification program.
3. EE Correlations to State Standards: NNREC will coordinate the development of a correlation to state standards for Project Learning Tree, working with the Nevada Department of Education, land and resource management agencies, and higher education faculty. We will also support the updating of the Project WET correlation to reflect the new 2005 science standards.
4. State EE Board or Advisory Council: NNREC will convene a statewide Advisory Council for Environmental Education, with significant participation from the Nevada Department of Education, each of the state land management and resource agencies, the two largest school districts (Clark and Washoe), the Public Lands Institute of UNLV, prominent nonprofit organizations, and one member each from the House and Senate of the State Legislature.

NNREC will facilitate the council as long as desired by the group, but will not “own” it or direct it beyond the initial creation. NNREC will be an active participant in the council.

5. EE Training for Teacher Educators: NNREC will encourage every instructor pre-service teachers to take at least one of the “project” workshops, and provide continuing support for use of project activities within every course for pre-service teachers, not just science methods courses. We will provide guest facilitators or coordinate expert presenters to support use of the project content in all courses. We will work with UNLV, UNR, LTCC, WNCC, CCSN, Great Basin College, and Sierra Nevada College to accomplish this goal.
6. EE Model or Resource Schools: NNREC will identify schools which are implementing effective environmental education programs grade-level-wide or school-wide, and publicize these schools as models of effective practice. We will encourage schools and districts to recognize the leadership of these schools, and to disseminate the effective practices through documentation, site visits by other educators, and mentor programs. If we are unable to identify enough schools of sufficiently high quality to address this component, NNREC will seek funding and request mentoring by the Idaho Environmental Education Association in developing model schools.
7. Online Database of EE Resources: NNREC will create an online database that complements and enhances other existing databases and print resources (Environmental Leadership Green Directory, the Nevada Environmental Education Directory (online but out of date), Beyond the Classroom, Learning the Great Basin, and others). The database will include curriculum reviews and local adaptations, field trip destinations, classroom presentations, professional development opportunities for educators, and opportunities for individual students.
8. EE Grants Program: NNREC will work with all state land management and resource agencies and the Nevada Department of Education to determine stable funding mechanism, application procedures and award criteria for a consolidated environmental education grant program. NNREC might administer such a program as an extension of our existing mini-grant program.
9. Funding Sources: NNREC will work with agencies to determine a stable funding mechanism for environmental education programs. Sources would include regular agency budgets (perhaps with an earmark of 10% for educational programs), license plates, and environmental fines.
10. EE Guidelines and Standards: NNREC will receive training for a small cadre of educators within the state so that workshops on the guidelines and standards can be offered at all statewide and regional conferences. NNREC will develop materials that match the guidelines and standards to the Nevada education standards and statewide issues.

Components for which NNREC does not envision allocating significant resources during this five year period are: State Assessment that includes EE, EE Training for Preservice Teachers, State EE Office, State EE Master Plan, State Interagency Committee (though one exists for southern Nevada), State Curriculum/Resource Guides, K-12 EE Instruction Requirements, State-level EE Centers, and EE Trust Fund. NNREC does envision the major efforts on these components in the next five-year period, building on success (though not necessarily completion) of eleven components detailed above. The Nevada Department of Education has been the most absent of all the agencies we work with, and it will be necessary for us to develop a strong working relationship with them and to enlighten them about their responsibilities for leadership and funding before many of these deferred components can move forward.

Resources

Although NNREC refers to literally hundreds of publications in developing its approach to environmental education and the curriculum content of our workshops, the sources below have been critical to helping us define our model.

Boston, Bruce O., Sarah S. Pearson and Samuel Halpern (2005). *Restoring the Balance Between Academics and Civic Engagement in Public Schools*. Washington DC: American Youth Policy Forum.

Kaye, Cathryn Berger (2004). *The Complete Guide to Service Learning: Proven, Practical Ways to Engage Students in Civic Responsibility, Academic Curriculum & Social Action*. Minneapolis: Free Spirit Publishing.

Lieberman, Gerald A. and Linda L. Hoody (1998). *Closing The Achievement Gap: Using the Environment as an Integrating Context for Learning*. San Diego: State Education and Environment Roundtable.

National Research Council (2000). *Inquiry and the National Science Education Standards*. Washington DC: National Academy Press.

National Research Council (1996). *National Science Education Standards*. Washington DC: National Academy Press.

North American Association for Environmental Education (2004). *Excellence in Environmental Education—Guidelines for Learning (K-12)*. Washington DC: North American Association for Environmental Education.

North American Association for Environmental Education (2004). *Nonformal Environmental Education Programs - Guidelines for Excellence*. Washington DC: North American Association for Environmental Education.

Sobel, David (2005). *Place-Based Education: Connecting Classrooms & Communities*. Great Barrington MA: The Orion Society.

Sobel, David (1996). *Beyond Ecophobia: Reclaiming the Heart in Nature Education*. Great Barrington MA: The Orion Society.

Stone, Michael K. and Zenobia Barlow, editors (2005). *Ecological Literacy: Educating Our Children for a Sustainable World*. San Francisco: Sierra Club Books.

Van Matre, Steve (1990). *Earth Education: A New Beginning*. Greenville WV: The Institute for Earth Education.

Programs

Some of the professional development and curriculum programs that may be used in fulfilling our professional development plan may include.

Project Learning Tree

Project WET

Project WILD

Project Archaeology

Schoolyard Habitats (National Wildlife Federation)

NERDS (Nevada Educators Really Doing Science – UNR & Nevada Department of Education)

Community Leaders in the Classroom (SWEP) and/or Training Tools for Non-Formals

Northwest Earth Institute discussion courses

River of Words

Partners

These partners are people that we have previously worked with to some degree. We expect to add other entities and individuals as we develop our professional development program.

Agencies

Nevada Division of Forestry (Rich Harvey, John Jones, Margie Klein, Lisa Ortega)
Nevada Department of Wildlife (Kelly Clark, Elsie Sellars, Kim Toulouse, Norv Dallin, Ivy Santee, Geoff Schneider)
Nevada Department of Environmental Protection (Mary Kay Riedl)
Bureau of Land Management (Sue Baughman, Kathy August, JoLynn Worley)
National Park Service (Kay Rohde)
USDA Forest Service (Genny Wilson, Portia Jelinek, Bruce Lund, Michelle Caviness, Michael St Michel, Linda Ries)
Nevada Tahoe Conservation District (Jill Sarick, Kelly Kelso)
Bureau of Reclamation (Phil Aurit)
Fish & Wildlife Service (Callie Le'au Courtright)
Clark County Museum (Christie Leavitt)
Nevada State Parks (Chris Macek)
Desert Conservation Program (Denise McConnell)
Nevada State Museum and Historical Society (Barbara Slivac)
Nevada Division of Minerals
Southern Nevada Agency Partnership (Jennifer Haley)

Schools

CHOLLA – Connecting Hands On Life-long Learning Adventures
Nevada Department of Education (Richard Vineyard)
Washoe CSD (George Ochs, Carol Heinrich, Lianne Jackson, Shirley Pollock)
Clark CSD (Joyce King, Diana Sjoberg)
Carson CSD (Phyllis Atkinson, Lori Tureson)
Southern Nevada Regional Professional Development Program (Sandy Davis)

Nonprofits

Nevada Outdoor School (Stephanie Lefevre)
Las Vegas Natural History Museum (Amy Page, Marilyn Gillespie)
Springs Preserve (Catherine Muir)
LTEEC – Lake Tahoe Environmental Education Association (Leslie Allen)
Great Basin Outdoor School (Sue Jacox)
River Wranglers (Linda Conlin)
Cottonwood Circles – Northwest Earth Institute (Mary Lee Dazey)
Environmental Leadership (Sonya Hem)
Nevada Wildlife Federation (Lorna Weaver)
Space Science for Schools (Paul Guttman)
Tahoe Rim Trail Association (Mark Kimbrough)
Sierra Club
Tortoise Group (Betty Burge)
Red Rock Canyon Interpretive Association (Linda Nations)
Outside Las Vegas Foundation (Alan O'Neill)

Higher Education

Sierra Nevada College (Francesca Bero)
UNLV - University of Nevada Las Vegas
Public Lands Institute (Allison Brody, Nancy Flagg, Daphne Sewing)

UNR – University of Nevada Reno (Glenn Miller, Michael Robinson, John Cannon, Pam Cantrell)
Great Basin College (Doug Hogan)
University of Nevada Cooperative Extension (Maria Ryan, Steve Lewis, John Cobourn)

Business

Newmont Mining (Patty Herzog)
The Atlantis Aquarium (Debbie Canestrelli)
Secret Garden & Dolphin Habitat (Missy Giannantonio)