THE FACILITATOR

Chapter Contents

The Role of the Facilitator

The Volunteer Facilitator plans, organizes, and facilitates Project WILD teacher training workshops. The Facilitator serves as a guide, rather than a teacher, helping workshop participants gain a better understanding about Colorado Parks and Wildlife, wildlife management in Colorado and assist them in discovering the potential that Project WILD holds for them as educators. Project WILD encourages participation by all persons regardless of race, color, national origin, gender, age or sexual orientation.

Why Become A Facilitator?

Workshop Facilitators are the lifeblood of Colorado Project WILD. Nationwide, Facilitators have successfully trained over a million educators to use the Activity Guides. We couldn't do it without you.

You are joining a prestigious group. In Colorado, Project WILD facilitators are highly respected professionals with environmental education community. As you join the ranks, you can look forward to networking with your peers, a diverse group that includes university professors, secondary teachers, elementary teachers, non-formal educators, naturalists, artists and others. Learn from their experiences and soon, you'll be sharing your own.

Additional benefits of becoming a Volunteer Project Facilitator include:
*Access to professional development
* Incentive awards
*Fulfillment, appreciation and fun

This handbook is the direct result of what we have learned by experience: what works and what doesn't. Consider this a guidebook for you to personalize as you go through training. We've provided a few prompts to help get your creative skills flowing.

Question 1: What is my motivation? Why did I become a Facilitator?

_____

_____

_____

_____

Facilitators are responsible to:
   Statewide and Regional Parks and Wildlife Education Coordinators

Those who apply to become a facilitator must have participated in at least two of the Project-related professional development workshops. An invitation will be extended to those individuals whose backgrounds and geographic locations meet program needs at that time. Facilitators are also expected to attend the Wildlife Educators Conference or regional volunteer trainings once every two years. This is an important opportunity for obtaining new materials and information, getting to know the coordinators and other facilitators, and sharing successes and suggestions for improving our statewide program.

Colorado Project WILD and Wildlife Educator Facilitator
Volunteer Facilitator Position Description

Supervisors:

> Local Colorado Parks and Wildlife (CPW) Regional Education Coordinator
> Statewide Educator Outreach Coordinator

Position Summary:

> Project WILD, Growing Up WILD and Flying WILD are among the conservation education programs that provide educators supplemental tools through background information and activities to enhance their students' understanding of the natural world.
>
> Volunteer Facilitators initiate and lead or co-lead the professional development training workshops where formal and non-formal educators are trained to use wildlife education materials. These workshops familiarize participants with the supplemental curricula and are the only means for educators to obtain these materials.

Qualifications to Volunteer:

- Attend at least one Project WILD or CPW-sponsored educator workshop.
- Have at least one year experience in environmental education, formal or non-formal.
- Complete program application and interview process.
- If accepted, attend New Facilitator Training .

Time Commitment

> Volunteer Facilitators are asked to lead or co-lead at least one workshop per year as well as attend the Facilitator Leadership Conference at least once every two years.
>
> Workshops are generally 6-16 hours, depending on topics and credit offered. Prep time for each workshop will vary, but on average takes between 4 and 20 hours.

Requirements

- Agree to follow volunteer policies and procedures outlined in the Facilitator Manual.
- Represent and support the missions of the programs and associated organizations professionally and responsibly.
- Maintain familiarity with the continually updated guides and resources.
- Notify Regional and State coordinators when address or volunteer availability changes.

Benefits

- Recognition as a role model and leader in Colorado environmental education.
- Professional development opportunities and access to the latest materials.
- Support from and networking with other volunteer facilitators.
- Incentive awards.
- Supplemental insurance coverage while volunteering.

DUTIES AND RESPONSIBILITIES

Facilitate Workshops

Facilitators throughout the state help ensure that Project WILD workshops are offered to educators in their communities on a regular basis. As a Colorado facilitator, you are expected to plan, organize and conduct a **minimum of** one six-hour Project WILD workshop each year. Workshops may be offered to a wide variety of education providers: K-12 teachers, youth group leaders, other educators, and natural resource professionals.

We highly recommend that you *co-facilitate* your workshops, especially as you are learning the ropes. You may co-facilitate with one or two other facilitators who attended your training, or with an experienced facilitator. You may also invite a resource specialist to present a portion of the workshop agenda (See Appendix - "Local Resource Specialists").

Facilitators are also responsible for setting up and advertising workshops. Facilitators keep state/regional coordinators informed of both proposed workshops and completed workshops in their local areas, obtaining assistance if needed.

Maintain Familiarity with Materials and Procedures

The success of Project WILD is partly due to the fact we are continually updating content and methodology to reflect current trends in education reform and natural resource management. Facilitators must maintain familiarity with the activity guides, workshop procedures and paperwork requirements, as well as awareness of environmental education resources in their communities.

Complete Paperwork

Facilitators accurately complete and submit all required paperwork to their Colorado Parks and Wildlife coordinator in a neat and timely manner, within seven days of their workshop.

Be Professional

As a volunteer for Project WILD and Colorado Parks and Wildlife, please remember to conduct yourself in a professional manner. A workshop facilitator must put personal biases and political, social or environmental agendas aside (See the Appendix article -- "Two Hats"). Our goal is to present unbiased information so citizens can become knowledgeable and form their own opinions on natural resources issues. This is why our activities have always taught children "how to think, not what to think."

Name Tags

Facilitators will be given official Project WILD nametags. This should be worn at all workshops to establish your role as an official representative of Colorado Parks and Wildlife.

Facilitator Evaluation

In addition to workshop participants' evaluations, which are reviewed by Regional and State Coordinators, performance evaluations may be conducted by State or Regional Coordinators.

Insurance

Volunteers engaged in official and pre-approved activities are covered under Colorado Parks and Wildlife with personal liability and injury insurance policies. Please notify the State Coordinator immediately, or within 24 hours, if

you or any participants are injured in any way, or property is damaged during a Project WILD workshop or event. For more information, contact the State Coordinator.

Change of Address

It is the responsibility of the facilitator to notify State and Regional Coordinators of a change of address, phone, and email information.

Dismissal

Facilitators who do not comply with Colorado Parks and Wildlife policies or procedures, mission and goals, wildlife laws, etc., may have their volunteer service terminated with the agency.

FACILITATOR REWARDS & INCENTIVES

Workshop Fees and Expenses

Although facilitators are sometimes reimbursed for their costs, it is important to recognize and maintain the volunteer status of Project facilitators. Their volunteer time is considered and counted as an in-kind donation and is an essential component for certain grants.

For detailed information on workshop fees and reimbursements, see "The Workshop" Chapter of this notebook.

Wildlife Educators Conference and Regional Trainings

Facilitators are expected to attend the Statewide Wildlife Educators Conference or Regional Trainings at least once every two years. These events are our primary opportunity for sharing ideas and information about issues and topics in natural resources and education, and for recognizing and rewarding facilitator accomplishments. Presentations of new activities and materials by facilitators, coordinators, and natural resource professionals are interspersed with field trips and networking sessions. Opportunities for fun, entertainment and networking are abundant.

EQUAL OPPORTUNITY STATEMENT - TITLE VI, CIVIL RIGHTS ACT

The Colorado Project WILD program receives federal aid through the Wallop-Breaux Amendment to the Sport Fish Restoration Act. This federal legislation provides support for aquatic resources education Under Title VI of the Civil Rights Act of 1964, the US Department of the Interior prohibits discrimination on the basis of race, color, or national origin. Any facilitator, student or other person who believes they have been discriminated against in any program, activity or facility or who desires further information regarding Title VI should contact the following office:

Office for Equal Opportunity
US Department of the Interior
Washington, DC 20240

Volunteer facilitators and/or agency employees of Colorado State Agencies are subject to Title VI of the Civil Rights Act of 1964 and shall offer all persons the opportunity to participate in said program or activities regardless of race, color, or national origin. No individual shall be turned away from or otherwise denied access to or benefit from any program or activity that is directly associated with a program of State Agencies on the basis of race, color or national origin or for any type of handicap.

Colorado Project WILD and Wildlife Educator Facilitator Volunteer Agreement

This Volunteer Agreement describes the arrangement between the Colorado Parks and Wildlife - Wildlife Education Facilitator program and you. We appreciate you volunteering with us and will do the best we can to make your volunteer experience with us enjoyable and rewarding.

Supervisors:
Local Colorado Parks and Wildlife Regional Education Coordinator
Statewide Educator Outreach Coordinator

Volunteer Commitment:
As a Volunteer Facilitator you agree to initiate and lead or co-lead professional development training workshops where formal and non-formal educators are trained to use the wildlife education curriculum materials you are trained to Facilitate. These workshops include Project WILD, Growing Up WILD, Flying WILD, Field Investigations, Basic Archery Instructor (BAI) trainings and/or special topics.

To remain an "Active" Volunteer Facilitator, you agree to lead or co-lead at least one workshop/ training per year as well as attend the Wildlife Educators Conference or local trainings at least once every two years. Facilitators who do not complete the minimum requirements are moved to "Inactive" status.

Workshops are usually 6-16 hours, depending on topics and credit offered. Prep time for each workshop will vary, but on average takes between 4 and 20 hours. The minimum time commitment to lead a 6-hour workshop/training is about 12 hours.

As a Volunteer Facilitator, you agree to:
- Meet participation requirements listed above.
- Follow volunteer policies and procedures outlined in the applicable Program Manual.
- Represent and support the mission of the Colorado Division of Wildlife professionally and responsibly.
- Maintain familiarity with the continually updated guides and resources.
- Notify Regional and State coordinators when address or volunteer availability changes.

As our Volunteer Facilitator, we agree to provide you with:
- Recognition as a role model and leader in Colorado conservation education.
- Professional development opportunities and access to the latest materials.
- Support from and networking opportunities with other volunteer facilitators.
- Incentive awards for participation.
- Supplemental insurance coverage while volunteering.

By signing this agreement, I agree to the above terms as an official Colorado Wildlife Education Volunteer Facilitator.

_____   _____

Signature   **Date**

_____

Printed Name

Chapter Contents

Project WILD is ...

- Lively and interactive for fun learning!
- Age appropriate.
- Engaging for all learning styles.
- Extensively reviewed, tested, and evaluated.
- Used by classroom teachers and non-formal educators.
- Balanced and fair, neither pro nor con on value-sensitive issues.
- An effective method for teaching problem solving and decision making.
- For integration into all subjects and curricula.
- An international network of professionals.

Evolution of Project WILD

The Beginning
During the 1960's and early 1970's, awareness of and concern for environmental conditions swept through the country. Rachael Carson published **Silent Spring**, which exposed chemical and pesticide dangers. Scientists documented the pollution of rivers, lakes, soils, air and rising extinction rates of plant and animal species. The first manned space flight allowed humans for the first time to view our planet from a distance. The first Earth Day celebration on April 22, 1970, was followed by a decade of conservation-oriented action to conserve and restore our natural resources.

It became evident that there was a lack of comprehensive, consistent and scientifically sound educational materials to help citizens learn about the Earth Systems upon which all life depends. To address this need, the **Western Regional Environmental Education Council** (WREEC) was created in 1970. Its initial goal was to bring together representatives of education and natural resource agencies from 13 western states to develop effective environmental education programs.

From the beginning, the Workshop Goals have been to:

❑ Become familiar with the very user-friendly Project activity guide

❑ Meet and share ideas with other teachers

❑ Meet and network with natural resource professionals

Project Coordination
Almost every state wildlife agency hosts a Project WILD coordinator that works directly with the national level organization. Colorado Parks and Wildlife is fortunate to have a state coordinator and regional education coordinators who work together to create opportunities for Project WILD workshops.

Project WILD
In 1983, WREEC and the **Western Association of Fish and Wildlife Agencies** (WAFWA), launched *Project WILD*. The program uses wildlife as a focus for teaching environmental principles. WAFWA is comprised of the directors of the state and national public agencies in 13 western states who are responsible for management of wildlife in their respective regions. Colorado was one of the 13 original WAFWA states spearheading the creation of WILD.

Educators and resource professionals were involved from the beginning as writers of background information and activities. This increased accuracy of the materials and added validity to the program. Educators were then trained as volunteer facilitators to introduce the Project WILD program to their peers. The workshop model established the Project as a teacher-training program, not a bookseller.

Activity guides were designed from a pre-developed framework of natural resource concepts, which later made it very easy to correlate with national educational standards. All activities were rigorously evaluated in classrooms with pre- and post-knowledge tests and only included if they accomplished intended student objectives. Activities are science-based, but interdisciplinary and require only simple, easily obtained materials.

With Project WILD, WREEC did not seek to produce a course of study, but to develop a collection of good learning activities that could be used in a variety of settings and content areas. Utilizing the PLT workshop model and activity guide format, WILD has also been tremendously successful in the United States and abroad. There are now sponsoring agencies and organizations in almost every state and six countries around the world. In Colorado, over 800 educators participate in WILD workshops each year. Worldwide over 1,000,000 educators have been trained in Project WILD, reaching an estimated 38 million youth every year.

Evolution of Project Wild

Revisions to the materials occur periodically, based on educators' suggestions, changing trends in education, and expanding awareness and research about environmental issues. New topics, more background information, differentiated instruction, technology connections, and reading connections are developed and implemented into each new edition.

All of the Projects provide activities and materials for Spanish speaking students and have been correlated to Colorado and national academic standards and benchmarks.

In 1996, with the expansion of the Projects throughout the U.S. and abroad, WREEC changed its name to the **Council for Environmental Education (CEE)** to reflect this national and international focus. CEE is the national sponsor of Project WILD. www.projectwild.org and is based in Houston, Texas.

Copyright Rules

Nothing in any of the Project activity guidebooks may be copied or reproduced by any means without written permission from the copyright holders, except for those pages designated as "student pages" which may be reproduced for educational use in conjunction with the appropriate activities. Contact your Regional or State Coordinator for assistance and guidance if you would like to copy and put Project activities into other curricula.

Sponsors

Project WILD, nationally is a joint project of the Council for Environmental Education (CEE) [formerly Western Regional Environmental Education Council, Inc. (WREEC)] and the Western Association of Fish and Wildlife Agencies (WAFWA). CEE is a national network of state department of education and natural resource agency professionals. The Council's missions are to support environmental education through the management and development of environmental education programs; to publish and disseminate environmental education materials; and to facilitate the development and maintenance of partnerships for environmental education. WAFWA is comprised of the directors of the public agencies in 13 western states who are responsible for management of wildlife in their respective states.

CEE is also the national sponsor of Growing Up WILD, Flying WILD, Project WILD – Sciences and Civics, WILD about Elk and WET in the CITY.

Project WILD is locally sponsored by Colorado Parks and Wildlife through the sale of hunting and fishing licenses, and by Colorado Lottery revenue as distributed through funding from Great Outdoors Colorado (GOCO).

About Colorado Parks and Wildlife...

In July 2011 the Colorado Division of Wildlife merged with Colorado State Parks to form Colorado Parks and Wildlife. The Division of Wildlife was the sponsor of Project WILD and that agency managed the state's 960 wildlife species. It regulated hunting and fishing activities by issuing licenses and enforcing regulations. It also managed more than 230 wildlife areas for public recreation, conducts research to improve wildlife management activities, provided technical assistance to private and other public landowners concerning wildlife and habitat management, and developed programs to protect and recover threatened and endangered species. Wildlife regulations were established by the Wildlife Commission.

The agency received revenue from hunting and fishing license fees (65%), federal funds (14%), GOCO lottery funds (17%), interest on the wildlife cash fund reserve (2%), and other miscellaneous cash sources (2%). The Colorado Division of Wildlife does not currently receive any of the state's tax dollars to run its programs.

The newly formed joint agency is currently being designed and updates for Facilitators will be shared as decisions are made about the new mission, funding and purpose of the agency.

Although Project WILD has many sponsors and supporters, it would not exist were it not for the dedication and commitment of teachers, wildlife biologists, interested citizens, school administrators and other ecological enthusiasts.

Project WILD has adopted policies and guidelines that state the program's commitment to neutrality on controversial issues, treating such issues fairly and honestly without advocating any particular point of view and recognizing that people need information from a variety of sources to make their own informed decisions. Project WILD programs, activities, and materials are not to be used to promote agency or organizational policies or political points of view.

Conceptual Framework

Activities in the *Project WILD* and *Project WILD Aquatic K-12 Curriculum Activity Guides* are organized into three major sections, generally reflecting that developmental structure. The conceptual framework begins with activities about ecological knowledge, then moves towards social and political knowledge, and finally moves to sustaining fish and wildlife resources.

Activities are intended for use in both classroom and non-formal settings. Educators may choose one or numerous Project WILD activities to teach a concept or skills. The activities may be integrated into existing courses of study, or an entire set of activities may serve as the basis for a specific course.

Instructional materials are designed to support state and national academic standards appropriate for grades K-12. The activities can be easily adapted to meet the learning requirements for academic disciplines ranging from science and environmental education to social studies, math, and language arts.

The Project WILD Activity Guides lead students through a process that begins with awareness; moves toward understanding; challenges preconceived notions; and instills the confidence, skills, and motivation to take responsible action on behalf of the environment. Project WILD recognizes that in addition to classroom experiences that expand their awareness, knowledge, and skills, young people need to know they can create positive changes—changes for themselves, for others, and for the planet. That's why Project WILD uses effective methods to teach problem solving and decision making, teaching students how to think, not what to think. We know that experiencing some success in the process at an early age contributes to adults taking initiative as citizens. Engaging students in Project WILD activities does this, thereby encouraging responsible ecological citizenship.

Commitment to Quality

Project WILD continually monitors and evaluates its program with the purpose of maintaining a well-conceived, tested, current, and effective program that meets the needs of educators.

- Hundreds of activities for the Project WILD Activity Guides (K-12 Guide and Aquatic Education Guide) were written by teachers, school administrators, university faculty members, wildlife professionals, and representatives of private youth, environmental, and conservation groups in a series of regional writing conferences.
- The conceptual framework for Project WILD was developed through a rigorous process to ensure its accuracy, balance, and educational validity. It was critiqued and reviewed by more than 500 professionals before final selections were made and guides were produced.
- All Project WILD materials are continuously reviewed by science, curriculum, and environmental experts for educational soundness, balance, and content accuracy.
    - All materials are pilot tested by classroom teachers to ensure that stated instructional objectives are met, to evaluate grade level appropriateness, and to assess the quality of the activity and student involvement.
    - We encourage and welcome suggestions for revisions to the existing Project WILD activity Guides. Printings "each year" accommodate suggested revisions when possible.
    - Each participant in a Project WILD workshop is asked to complete a participant survey form. According to an ongoing analysis of these evaluation forms, 99% of our participants report that the workshops were either good or excellent.
- A comparative study (based on a field test of the Project WILD Activity Guides in urban, suburban, and rural areas by over 6,000 students) showed that students in all areas acquired knowledge, skills, and an appreciation of wildlife when their teachers used Project WILD activities.
- Project WILD has earned the endorsement of organizations including the California Board of Education, the National Council for the Social Studies, and the International Association of Fish and Wildlife Agencies.

National
Project WILD
Council for Environmental Education
5555 Morningside Drive, Suite 212
Houston, TX 77005
Phone (713) 520-1936
www.projectwild.org

In Colorado
Project WILD
Tabbi Kinion
Colorado Division of Wildlife
6060 Broadway
Denver, CO 80216
PH: (303) 291-7165
FAX: (303) 291-7113
Email: tabbi.kinion@state.co.us
http://wildlife.state.co.us/Education

NAAEE Guidelines for Excellence

Project WILD
Aquatic Project WILD
K-12 Activity Guide

Council for Environmental
Education
5555 Morningside Drive, Suite 212
Houston, TX 77005

phone: (713) 520-1936
fax: (713) 520-8008
e-mail: info@c-e-e.org
website: www.projectwild.org

Cost: Distributed in training
workshop which is free or requires
a minimal charge.

SUBJECTS

Economics
Fine Arts
Language Arts
Mathematics
Physical Education
Science
Social Studies

IN A NUTSHELL

Project WILD is designed to be "an interdisciplinary, supplementary conservation and environmental education program emphasizing wildlife." Each of the 121 activities in the *Project WILD* guide along with the 48 activities in the *Aquatic Project WILD* guide can be conducted either individually, with other *WILD* activities, or as part of an existing curriculum or unit. Activities are grouped in seven subject areas by theme: awareness and appreciation; diversity of wildlife values; ecological principles; management and conservation; people, culture and wildlife; trends, issues and consequences; and responsible human actions. Each lesson includes objectives, method, background, materials, procedure, extensions, and evaluation. Information is also provided to explain the age range, subjects covered, skills involved, time required, group size recommended, setting, references to the program's conceptual framework, key vocabulary, and relevant appendices. Appendices include the conceptual framework, lists of activities by grade level and subject, and guides for use of animals in classrooms, and other reference material.

Grade Level
K-12
Length
386 pages
Date Published
1992

The Bottom Line	"Addresses real-life issues which concern us all." "Subject matter needs to be presented so that students can understand both sides of an issue."

	Key Characteristics	Strengths Noted	Other Considerations
What the REVIEWERS Said!	Fairness and Accuracy	Activities are field tested and reviewed by professionals in different fields. Some activities utilize role play to help students understand differing perspectives.	Some information is outdated and does not reflect recent changes in technology or practice.
	Depth	Activities are presented within a clear conceptual framework. Addresses ethical, cultural and economic issues and relationships.	More specific information is needed for some lessons. Focus of some activities seems narrow.
	Emphasis on Skills Building	Age-appropriate activities encourage participants to use critical thinking and problem solving skills and to develop own conclusions.	
	Action Orientation	Many activities encourage or simulate action on genuine and topical issues.	Could benefit from more ideas for local projects.
	Instructional Soundness	Allows for building on concepts if used in organized curriculum. Heavy emphasis on critical thinking, learner participation, and helping students draw own conclusions.	
	Usability	Contents are cross-referenced by age, topic, skills, concepts, subjects, and location, and contain a glossary and index. Activities are adaptable and lend themselves to discussion and review.	

"One of the easiest books to find activities that fit certain objectives, concepts, etc. Good supplement for a curriculum in environmental education."

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Other Project WILD Materials

You do not need to attend a Project WILD workshop to purchase supplementary curriculum materials.   For prices and ordering information, contact your State or Regional Coordinator or visit www.projectwild.org

WILD About Elk
An Educator's Guide
This guide is a product of the Rocky Mountain Elk Foundation and the Council for Environmental Education. WILD About Elk provides a summary of the biology and ecology of elk. Topics addressed include elk's physical characteristics and adaptations, habitat and historical range, behavior, life cycles, social structure, migratory patterns, and the present and historical relationships between elk and humans. A primary message woven throughout the guide is the importance of habitat to the elk's survival. Activities in the guide assist educators in helping their students learn about elk and their habitat. A resource list facilitates further exploration of issues affecting elk.

80 pages. 1994.

Project WILD Spanish Supplement
This guide contains 34 translated activities from the Project WILD K-12 Activity Guide and the Project WILD Aquatic Education Activity Guide. The Spanish supplement introduces Project WILD to new audiences - Teachers, scout leaders, school volunteers, park and recreation, nature center, zoo and museum staff - who live and work in primarily Spanish-speaking communities. Project WILD hopes that these materials will enhance environmental education outreach to a new generation of students and volunteers.

240 pages. 1998.

Flying WILD-An Educator's Guide to Celebrating Birds
This guide serves as a "how to" guide for planning and producing a student directed festival. Additionally, the guide will provide educators with activities to conduct prior to the festival as well as necessary background information relating to birds and bird conservation—including bird biology, habitat and migration issues, bird identification and observation, cultural connections to birds, conservation efforts and follow-up student conservation projects. School bird festivals will compliment and extend the efforts of International Migratory Bird Day celebrations. For more information, visit *www.flyingwild.org*.

358 pages. 2004.

Science and Civics: Sustaining Wildlife
Supported by the National Environmental and Training Foundation (NEETF) and Phillips Petroleum Company, this semester-long curriculum is designed to meet the expressed need of high school educators and administrators for materials that will prepare students to select and implement environmentally focused action projects within traditional high school course structures.

The program will also help teachers and students meet state course requirements by utilizing the environment as a means to apply science, social studies, and other disciplines to real-world situations. This curriculum guides students in the investigation of wildlife concerns and encourages them to collaborate their findings in responsive action projects that benefit wildlife, people and the environment.

300 pages. 2000.

Growing Up WILD
Growing Up WILD is an early childhood education program that builds on children's sense of wonder about nature and invites them to explore wildlife and the world around them. Through a wide range of activities and experiences, GUW provides an early foundation for developing positive impressions about nature and lifelong social and academic skills. www.pwgrowingupwild.org

128 pages. 2009

THE WORKSHOP

Chapter Contents

THE WORKSHOP

This workshop protocol was established because it has been found that educators will more readily use the materials if their uses are demonstrated and experienced. The only way WILD activity guides may be obtained is through nationally-standardized training workshops.

Workshops are designed to show participants how to use WILD activities to enhance science, math, language arts, social sciences, art, health, and even physical education lessons. They model effective teaching strategies and encourage educators to explore new methods and techniques. Wherever possible, workshops feature hands-on instructional methods. Questions specific to students' learning styles, grade/ skill levels, settings, etc. should be encouraged and addressed. Attendees are invited to share ideas and make suggestions about how activities can enhance teachers' current lesson plans. A variety of teaching and learning styles and creative ideas are demonstrated and discussed. Learning takes place from the workshop leaders and from participant to participant.

PLANNING A WORKSHOP

Workshop Objectives
- To train participants to use activity guides and to encourage frequent use.
- To introduce participants to environmental education support and resources
- To have fun

Workshop Goals
- Become familiar with the activity guide books and activity components
- Experience at least 4-6 activities from the Project WILD materials
- Learn how WILD can help meet state and district education standards and benchmarks
- Learn about state and national sponsoring agencies
- Learn the history, mission and goals of the Program
- Become enthusiastic and committed to try using WILD activities with their students
- Gain knowledge and perspective about natural resources, conservation and management
- Have the opportunity to meet and share information with educators and resource personnel
- Be encouraged to continue communication and support for environmental education
- Have fun!

Necessary Components of Every Workshop
- Registration form
- Introduction to Project WILD:
    - Sponsor
    - Mission
    - Goals
    - Brief histories
    - How they help teachers
- Project activities (facilitator led)
    - As many as possible (4-6 activities)
    - Model themes, aware to responsible action, storylines
    - Tie activities to specific district or state education standards

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- o   Select activities for various grade levels, or specific for participants
- o   Do some indoor, some outdoor, some physical, some cerebral
- Walk through the Guide (Jeopardy, Scavenger Hunt, 'Hike the Guide')
    - o   Briefly orients participants to activity guide or have them do it on their own during the workshop
- Reference to Standards Correlations, as appropriate
- Closing and evaluations

Optional but Preferred Components

- Peer teaching-participants conduct activities for the group.
- Ice-breaker or get-acquainted activity (can be modified Project activity)
- Content or special program information about wildlife, forestry, or site. This can be a guest speaker, video or nature walk.
- Other resources available –handouts, "show & tell" of available books, programs, trunks, etc.
- Small group work session and/or homework -- how to integrate activities into existing curriculum
- Some provision for follow-up, if possible
- College credit paperwork (coordinate with regional or state project coordinators)
    - o   Clarify grading requirements and timeline to submit homework
    - o   Explain how to get transcripts

WORKSHOP CHECKLIST

Before the workshop:
Plan a workshop (at least 2 months in advance)
_____ Determine date
_____ Determine time
_____ Determine location
_____ Determine facilitator team (lead and co-facilitators)
_____ Identify audience (formal or non-formal educators, grade level, rural, urban, etc)
_____ Identify workshop goals
_____ Determine methods of promotion (flyer, CSM catalog, in-service, etc.)
_____ Determine if workshop will be offered for credit. If yes, then:
     _____ follow college or university credit granting guidelines and requirements

Schedule a workshop:
_____ Submit completed Workshop Request Form to Regional Education Coordinator
_____ Contact local Colorado Parks and Wildlife staff
_____ Promote workshop, promote workshop, promote workshop (be thorough and creative)

Design workshop
_____ Meet with other facilitators
_____ Plan agenda
_____ Mission, goal, history, sponsors
_____ Workshop time-line
_____ Variety of activities (indoor/outdoor, variety of skills, active/passive)
_____ Identify education standard, benchmarks, objectives to be addressed
_____ Assign tasks to each facilitator
_____ Schedule a guest speaker
_____ Plan for snacks and/or lunch if desired
_____ Note limitations (time, space, money, etc)

Request materials from Regional Education Coordinator
_____ Paperwork
_____ Activity Guides
_____ Spanish Guides, if applicable
_____ Supplemental materials (brochures, fliers, fabulous prizes, etc)
_____ Award Certificates (from regional *or* state coordinator)
_____ Special supplies (request in advance)

Final preparation
_____ Contact registered participants to confirm participation (letter, call)
_____ Inform participants of requirements, needed materials, dress, lunch, etc.
_____ Confirm meeting site and familiarize yourself with the area
_____ Furnishings (tables, chairs, coffee pot, overhead, writing surfaces)
_____ Access to facilities (restrooms, phone, electricity etc.)
_____ Access to building/outdoor area (limitations - open to public, etc.)
_____ Confirm set-up and clean-up schedule and responsibilities

At the workshop:
_____ Arrive early (1 hour)
_____ Set-up
_____ Register participants and complete paperwork, etc.

____ Conduct workshop
____ Hand out and then collect evaluations, collect checks (made out to appropriate agency or organization), and other paperwork or assignments if necessary
____ Award certificates
____ Clean-up

After the workshop:
____ Return paperwork in pre-addressed envelopes or directly to Regional Coordinator
____ Return extra materials to the Regional Coordinator
____ **Return CSM paperwork and checks to Regional Coordinator**
____ Inform Regional Coordinator of notable events, if any
____ Follow up with workshop participants, if possible

BEFORE THE WORKSHOP

Plan the workshop far ahead of time and promote it thoroughly. State and regional Project Coordinators are available to assist with all aspects of workshop planning. In most instances, the Colorado Parks and Wildlife Regional Education Coordinator will be your first contact for WILD workshops.

Arranging and Planning a Project Workshop

In a nut shell --
★   Determine local needs and opportunities
★   Fill out a workshop request form and send to the Regional Coordinator

Workshops are initiated in a variety of ways. Sometimes a sponsoring organization or Project coordinator identifies a workshop need and then arranges with a facilitator to plan and present the workshop. More often, a facilitator decides to do a workshop where he or she sees a need then arranges for the workshop to take place.

To initiate a workshop, begin by checking with your school, school district, county office of education, or other organizations you work with to find out whether they would be interested in sponsoring and/or hosting a workshop. Other possibilities include contacting local nature centers, museums, county parks, other agencies, or conservation-oriented organizations (such as an urban forestry organization, Girl Scouts, or 4-H) and gain their interest in sponsoring and/or hosting a workshop.

Fill out a workshop request form and send to the Project Regional Coordinator at least 2 months before the workshop.

Co-Facilitating

In a nut shell --
★   Planning and conducting a workshop with another facilitator has many advantages.

It is highly recommended that you *co-facilitate* your workshop, especially if you are a new workshop facilitator. You may co-facilitate with one or two other facilitators who attended your training or with an experienced facilitator (lists of facilitators are available from the State Coordinator).

Co-facilitating has many advantages, both for you as the facilitator and for the participants. You will have someone to share ideas with, help plan the agenda and your delivery, help gather necessary materials, share the responsibility for presenting activities, and for fielding questions. Participants have the advantage of seeing varying teaching styles and will learn from presenters with different areas of expertise.

If possible, you might consider co-facilitating with a resource specialist. Resource professionals include individuals with expertise in areas of forestry, air quality, agriculture or wetlands. This person can work with teachers on the activities you lead, help with specific content information, or provide technical assistance in hands-on activities. The resource specialist may also supply workshop materials and equipment.

Meeting and working with a resource specialist can also give participants a local resource contact that may help them plan classroom visits or identify field trip sites, resources for borrowing equipment or tools, and sources for materials like tree cookies or cores.

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Among co-facilitators, make sure it is clear who is responsible for each role, including workshop coordinator and contact for questions and sign up. If you do work with a co-facilitator, be as explicit as possible with each other *before* the workshop. It is important to identify what each of your roles will be. You may find it useful for each of you to complete the "Co-Facilitators Worksheet," and discuss your responses. This cooperative planning early on will allow for smooth transitions between each of our presentations and will also enhance your working relationship.

(See "Local Resource Specialists" and "Co-Facilitation Worksheet" at the end of this chapter.)

Considering the Audience

> **In a nut shell --**
> ★ Know your audience.
> ★ Select the site, workshop times and theme with your audience in mind.

Who is coming to your workshop? It is important to have a clear idea of who the audience will be in advance.

The needs and interests of your participants will help you plan the specifics of your workshop. If you have enough lead time, you might prepare a pre-workshop questionnaire to find out their expectations and needs for the workshop. If you know beforehand that the group you will be working with has a special area of interest, you may want to tailor the entire workshop to suit their needs.

Even if you do not know the specific needs of your audience, try to visualize what the audience would desire to achieve from the workshop. Is their attendance mandatory or voluntary? If it is mandatory ask yourself, "Why would the participants *want* to attend?" and be prepared to model what they can gain from using WILD with their students. For information about ways to meet the needs of your audience as adult learners, see "Adults as Learners," in the Appendix.

You might also consider whether there are any local issues or current trends in education that participants might be concerned about. If you identify possible issues or concerns, think about how you could address these during the workshop.

Deciding Where and When

> **In a nut shell --**
> ★ Examine the site and reserve it well in advance of the workshop.
> ★ Workshops should last a minimum of 6 hours each, in one or two sessions.

Once you've identified your audience, two other important considerations for designing your workshop are the workshop site and the time frame. Everything you do during the workshop will depend to some degree on these two factors.

> **The best workshop site is close by,
> provides easy access,
> includes an outdoor setting,
> is comfortable,
> and has amenities.**

Workshop Site
Successful workshops have been conducted in a variety of settings: from school sites to city parks, from museum classrooms to wooded retreats.   Before selecting a site for the workshop, think about its advantages and disadvantages and compare these to the workshop goals.

Minimum creature comforts are an important part of any workshop success. A workshop can be entirely outside and in a rustic setting; some of the most successful are. Equally successful workshops are in urban and indoor

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settings. Just make sure that people know in advance as to what they are getting into and what to bring: coffee cups, lunch, curriculum guides, good hiking shoes, etc. Think about ways you might overcome any disadvantages or constraints the space presents.

Wherever you plan to conduct the workshop, be sure to reserve the facility well in advance. Be sure to visit the site and become familiar with logistical details (places for activities, outlets, restrooms, kitchen, etc) before the workshop.

Some sites charge fees and some require proof of liability and accident insurance before you can hold a workshop there. If you encounter either of these conditions, contact your Regional Education Coordinator.

Checklist of things to consider for a workshop site:
- ❑ Travel distance is convenient for participants attending.
- ❑ Is there adequate space, facilities, and parking areas, with access to an outdoor area?
- ❑ Confirm that the site is available for the dates and time desired.
- ❑ Check for costs (rent, janitorial service, etc.).
- ❑ Is the site too small to comfortably accommodate the anticipated number of participants?
- ❑ Physical inspection of the site prior to setting up the workshop. Do not select a location that could be disrupted by non-related activities.
- ❑ Check for adequate restroom facilities and be sure they are clean.
- ❑ Check for adequate seating requirements, electrical outlets, lighting facilities, temperature controls, room for activities, any other physical property that you may need (tables, flip chart, dry erase board), and special regulations (i.e.: no smoking, etc.).
- ❑ Check for nearby telephone (for emergencies).

Workshop Time Frame
When planning your workshop, keep in mind that **the national guideline for length is at least six hours**. This requirement allows enough time to meet the workshop goals of participant familiarity with the Activity Guide and experiencing as many activities as possible. If college credit is available, a minimum of **7.5 hours per one-half credit** is required. (See "Continuing Education Credit" in the Appendix).

The required minimum number of contact hours can be accomplished through a variety of agenda schedules. Six or eight-hour workshops may be conducted in a single day. Participants are usually more focused during one-day sessions. Workshops may also be scheduled in several 3-4 hour sessions, spread out over several weeks. Sessions should not be less than 3 hours.

There are advantages to two shorter sessions spaced over a one- to four-week period. Between sessions, you may ask participants to conduct the activities you presented during the first workshop session (or other activities they select) with their students. At the following workshop session they can share what happened, and discuss adaptations or extensions they developed. Participants are also able to study the guidebooks and prepare additional activities for classroom use. If you decide to use this format, be sure participants have an incentive and are accountable for attending *both* sessions. For example, withhold college credit if minimum contact time or other course requirements are not met.

> **Six or eight-hour workshops may be conducted in a single day or in multiple sessions.**

It may be possible to work with school principals or curriculum specialists to schedule workshops during teacher in-service days if the agenda is designed to address school achievement goals. After-school workshops can be difficult, however, because participants are usually tired after teaching all day. If you decide to hold after-school sessions, you will need to consider ways to help teachers make the transition from school mode to workshop mode.

You may have the opportunity to conduct 2-5 day "combined " workshops. A minimum of four activities and six hours must be included for each Project (The other Projects are Project Learning Tree, Project WET and Project Food, Land and People). One way to develop a combined workshop agenda is to provide a separate block for each Project (i.e.: 6-

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8 hours of PLT and 6-8 hours of WILD, or 6 hours of WET, 6 hours of WILD and 6 hours of PLT). The four programs are quite compatible, but presenting them separately may help educators to become familiar with which activities are to be found in which books.

Another approach is to blend the activities around specific themes, educational standards, ecosystem, environmental issue or workshop site. All of the WILD activities have been correlated to Colorado education content standards and benchmarks, and were developed using complimentary conceptual frameworks. The activities correlate well by skills, topics, grade-level and location.

Workshop Fees

Project WILD
Workshop Fee Policy
2011

The purpose of this policy is to standardize the fee structure for workshops offered in Colorado for Project WILD. It is adopted by Colorado Parks and Wildlife (Project WILD).

The goals of this policy include:
1. Provide a mechanism for the individual organizations to generate the funds needed for program operations.
2. Allow facilitators to recover workshop expenses while still maintaining their volunteer status.
3. Provides a mechanism for building the Schoolyard Habitat Program co-sponsored by the Colorado Wildlife Heritage Foundation.

Workshop Fees
It is the policy of Colorado Parks and Wildlife to charge participants program fees according to the following for a typical workshop:

Mandatory - $10 (payable to the Colorado Wildlife Heritage Foundation)

Facilitator Fees
In addition to agency fees, facilitators may charge a $10 fee per participant. This fee is intended to off set some of the costs and to provide a small stipend to the facilitators. Facilitators have the following options when collecting the $10 fee from participants:

1. Collect the checks payable to the facilitator and keep the money as a stipend.

2. Collect the checks payable to the facilitator and donate all or a portion of the money to the Schoolyard Habitat Program by sending a separate, personal check to the **Colorado Wildlife Heritage Foundation.** (Make sure checks are **not** written to Colorado Parks and Wildlife) A letter must accompany the check explaining that this is a donation to the Schoolyard Habitat Program.

3. Collect the checks payable to the **Colorado Wildlife Heritage Foundation** as a donation to the Schoolyard Habitat Grant Program. If the facilitator does not wish to receive a stipend, they may ask the participants for a $10 donation to the Schoolyard Habitat Program. It must be clearly stated to the participants that this is an optional donation and that the money will be used to provide grants for schools. The checks must be made payable to the **Colorado Wildlife Heritage Foundation** not the Colorado Parks and Wildlife and the word "Donation" must be written on the memo line.

4. Facilitators who offer workshops as part of their official duties as a paid employee of an agency or other organization shall not collect the $10 fee as a personal stipend, but are able to instead apply the fee towards their organization.

Entrance Fees

Some organizations have an entrance fee that participants must cover. This additional fee should not be more than $10.

University Credit Fees
College tuition fees shall be collected on a separate check payable to the appropriate college or university.

Fee Summary Chart:

	Fee	For
Mandatory	$10	Colorado Wildlife Heritage Foundation
Optional	Up to $10	Facilitator not on work time
Optional	Up to $10	Host Organization – only if no Facilitator Fee
Optional	Up to $20	Facility Entrance Fee or Lunch fee
Maximum possible cost	**$40**	Does not include credit

Identify Specific Workshop Goals

In a nut shell --
★ Choose workshop goals based on audience needs.
★ Write down and announce 2-4 specific objectives for the workshop.

All workshop planning should focus upon the successful accomplishment of your workshop goals and objectives. Whatever your specific goals, write them down clearly on the workshop proposal, and announce them at the beginning of the workshop. You might also solicit and perhaps share from participants several personal objectives they have for the workshop.

Next, make a list of five or six objectives you wish the participants to achieve or skills you would like them to acquire during the workshop. For example, you may want them to become familiar with the activity book so they can choose activities that will enhance specific skills or topics addressed in the classroom.

Finally, determine the manner in which you want your participants to achieve each objective. In the example above, you may ask participants to "Hike the Guide" to discover the format and contents of the activity guide and learn how it can best be utilized in the classroom.

Selecting Project Activities

In a nut shell --
★ Select activities with goals, audience, and time in mind
★ A six-hour workshop must include a minimum of *five* Project activities
★ Variety and flexibility are good
★ Explain how each activity relates to state education standards

After you have considered your audience, you are ready to select Project activities to present. Do this in tandem with planning the agenda so that you get an idea of how much time you will have for activities. Keep in mind, however, that a six-hour workshop must include a minimum of five activities that are presented by either the facilitators or participants.

Choose activities that support the goals of your workshop, the interest areas of the participants, school district goals, the time and space available, the characteristics of the site, and/or your own personal preference. For a diverse group of educators select activities that reflect the interdisciplinary nature of the materials, their usefulness in many subject areas and at all grade levels, and, if possible, the range of concepts addressed by the Project.

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Select activities that involve a variety of learning styles and strategies, for example, creative writing, simulation games, drawing, outdoor investigations, and mathematics operations (See "Successful Facilitation Skills" and "Tools and Methods for Educators" in the Appendix). You might also want to select activities that demonstrate the Project's ability to help students move from awareness of environmental issues to action.

Plan the agenda to include both physically active and passive activities. By providing this variety, you give participants a nice sampling of the activities in the guides and create a more enjoyable and well-rounded workshop. Also allow for a mix of indoor and outdoor settings, weather permitting. Educators can see first-hand the flexibility and user-friendly arrangement of the guides. And don't forget to build in some reflection time too.

In general, plan to include activities *you* like to do - your enthusiasm and excitement will be contagious. You will know first-hand how the activity works; you may develop interesting extensions or variations or locate valuable resource materials you can share; you can bring in student work to demonstrate the activity's effectiveness.

Feel free to modify any of the activities with your own ideas and adaptations to fit local issues or interests, the time and space available for the workshop, and your own leadership style. Through your variations, you will be emphasizing an important idea: WILD activities are useable as written, and they can also serve as points of departure for new explorations. Clearly convey this flexibility during your presentations, but explain that all the activities have been rigorously evaluated as written.

If you plan to have workshop participants present activities to each other, these will count toward the total number of activities experienced. You might lead participants through a few activities, then form small groups in which participants select, prepare, and present an activity.

To tie-in with current practices of teaching conceptual learning, you may want to plan your workshops in a way that will show how WILD does this. For example, use a storyline to connect the activities you choose to demonstrate. These activities can be built around one of the conceptual themes (such as diversity) or focus on a special interest in your community.

All Project activities are correlated to Colorado science, math, reading and writing, geography, history, and visual arts standards. These are available on the Colorado Parks and Wildlife web page <http://www.wildlife.state.co.us/Education/correlations.asp >. Be sure to tell which standards and benchmarks align with each activity experienced or demonstrated, and tell participants how they can find and use the correlations. (See "Colorado Education Standards" and Project Correlations information in the Appendix.)

Planning an Agenda

> **In a nut shell --**
> ★ A workshop should follow steps to lead the workshop participant from 1) *awareness* 2) to *knowledge* 3) to *challenge*, 4) then finally to *action.*
> ★ Critical elements of the agenda are the timing and arrangement of the activities you choose.

After you have considered your audience and have begun selecting activities to present, you are ready to plan the workshop agenda. The following sections will give you some ideas about elements to include. Also look at the sample agendas at the end of this chapter for approximate times to allow.

A workshop should follow steps to lead the workshop participant from 1) an *awareness* of the Project, 2) to *knowledge* on the specifics of the program, 3) to an opportunity to *challenge* the ideas and/or come to *consensus* on the new ideas, 4) then finally to *action* -- to use Project materials in their teaching! This same sequence of learning stages is found within each activity and in the arrangement of activities in the guide books.

Developing a Workshop Agenda
- ❑ Develop a clear beginning, middle, and end.
- ❑ Build activities conceptually when possible.
- ❑ Carefully decide how much information and material you will give.
- ❑ Consider time of day to accommodate energy highs and lows (10a.m high, 1p.m. low, 4p.m. crash, etc.)
- ❑ Consider environmental changes during the day (cold mornings, windy afternoons, etc.)
- ❑ Start on time, end on time, always.
- ❑ Eat on time, take breaks on time, always (even if it means interrupting an activity -- they will remember where they were).
- ❑ Plan flexibility into the agenda.
- ❑ Plan for questions and discussions.
- ❑ Create two agendas -- one with all the details needed for the facilitators, one summarized for participants.
- ❑ Immediately after the workshop, refine your agenda.

Critical Elements of a Workshop Agenda:

- ❑ Welcome and Overview
- ❑ Getting Acquainted
- ❑ History
- ❑ Activities experienced by participants (minimum of 5)
- ❑ "Hike Through the Guide", "Leaf through the Pages" or "Wade through the Words"
- ❑ Other Resources

- ❑ Correlations to Education Standards
- ❑ Individual Classroom Planning
- ❑ The Workshop Ending
- ❑ Evaluation and Feedback
- ❑ Breaks
- ❑ Site-specific or Resource-specific Field Trip or Activity (Optional)

Critical elements of a workshop agenda:

Welcome and Overview. Plan how you will welcome the participants, introduce yourself and other presenters, and give a brief overview of the agenda. No matter how clearly you have stated the workshop purpose and time frame in your pre-workshop publicity, it is a good idea to restate them when you begin the workshop. People feel more comfortable if they know what to expect—and when.

Getting Acquainted. Plan how participants will introduce themselves. They are coming together for the workshop as learners, and creating a friendly and informal atmosphere at the beginning of the workshop will enhance the learning environment. Icebreaker activities can be used to get things started, especially if they do not know each other beforehand. If appropriate, do a quick needs assessment to pinpoint specific needs and expectations of each

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participant. In addition to the sample icebreakers offered in the Appendix of this manual, some of the Project activities maybe used as icebreakers.

Project History: Project WILD is proud of its beginnings and feel that sharing them with educators will help give them a better understanding of our goals and purposes.

The history should include:
✓ When, why, and by whom the idea for the Project was initiated
✓ Explanation of the national sponsors, who they are and their role in the program
✓ How the Project texts were developed and evaluated
✓ How states and foreign nations adopt the Project on a volunteer basis, and statistics on how many states and countries are currently involved with the Project
✓ Awards the Project has received
✓ The history of the Project within Colorado -- how long has it been here, the sponsoring agency, its mission, etc.

Activities. Plan how to you will present your activities. If you have invited a resource specialist, consider asking that person to lead appropriate activities. Present the activities in ways that engage participants *as learners* first, then allows them to reflect on the activities from their perspective *as educators* (see "Adults as Learners" in the Appendix). To help participants reflect on the activity, do a quick debriefing after each activity.

Debriefing is often the most important part of leading an activity. For debriefing, you might invite participants to share:
❑ what they learned through the experience
❑ what they would like their students to learn
❑ how they would adapt the activity to fit the needs of their students
❑ classroom management ideas and other suggestions they may have

Depending on your audience, have them share in small groups or in the group as a whole. You might also consider modeling the learning cycle in your activity presentation and debriefing. For more ideas on how to do this, see "The Learning Cycle," in the Appendix.

"Hike Through the Guide". Plan how you will help participants become familiar with the contents of the activity guide. Pass out a worksheet with questions about the content and formatting of the guides. Sample "Hikes" and questions for the Project are found on the Resource CD.

Other Resources. Consider how to introduce participants to books, materials, or local resources that support Project activities, and display these books and materials throughout the day. A blank "Local Resource Specialists" guide is provided in the Appendix.

Individual Classroom Planning. One of the initial questions participants are most likely to ask when they attend the workshop is "How can I use this in my classroom (or other settings)?" Individual classroom planning is an important component to include. Once your workshop participants have become familiar with WILD and some of the activities, they need time to directly connect these new materials to their students' needs and teaching goals. Plan adequate time for this component, even if you have to shorten something else.

If you want to include this individual planning, you might ask participants in advance to bring textbooks and lesson plans to the workshop. You could make a copy of the "Project Curriculum Planning Worksheet" handout in the Appendix for each participant.

Workshop Ending. The workshop ending is just as important as the workshop beginning. The emphasis here is less on fun, more on developing a renewed spirit of responsibility toward the environment and using environmental

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education to reach student academic achievement. "Memory Circles" or "Webs"- participants stand or sit in a circle and each contribute a comment or thought - can be used to refocus the attention of the group on their reasons for attending and to reflect on individual and group goals. The same conclusions can be achieved with a final brief group discussion.

Evaluation and Feedback. Plan time for each participant to complete the Participant Survey Form at the end of the workshop. *Be sure to obtain a legible evaluation survey from everyone who receives an activity guide.* These are photocopied and sent to the national offices, the accrediting institution, if any, and the state offices. It is on this form that participants indicate an interest in future facilitation possibilities.

Breaks. Include at least one brief morning and one afternoon break. Be sure to announce when these will be and where participants may find the restrooms, the refreshments, and perhaps a telephone.

Site-specific or Resource-specific Field Trip or Activity. This is a nice but optional component of the agenda. It is dependent on the length and goals of the workshop, the location of the workshop, and the availability of natural resource specialists to help lead the activity. This can attract participants to workshops ("hike to the bat caves with a wildlife biologist" or "visit the fire site with a firefighting forester") and can help provide a context for content that participants may be able to repeat or modify with their students.

Arranging the Agenda

When planning the agenda, remember that the pacing of the workshop activities is important. Keep in mind that certain modes work better at certain times of the day. For example, after lunch — when many of us tend to get sleepy — you might consider physical movement or visual activities that are more stimulating than making lists or watching a film. If possible, include "alone time," for individuals to reflect on ideas or events of the workshop. Also include small group time, so they can share ideas with each other.

Once you've created a draft agenda, decide which co-facilitator will be responsible for planning each section and/or activity.

Publicizing Your Workshop

In a nutshell --
 ★ Use more than one method to promote the workshop
 ★ Designate a contact person to keep a list of sign-ups

The groundwork to a successful workshop lies in giving potential participants enough information ahead of time through the use of flyers, brochures, personal invitations, media exposure, or other means of spreading the word. Pre-workshop publicity announces your workshop to those who may be interested in attending. Effective publicity lets potential participants know what to expect.

It is advisable with most workshops to distribute some kind of written information in advance. Make sure the workshop goals and objectives are clearly stated. That way, people arrive having made a choice to participate in something they value. You still have to restate and reaffirm the goals at the beginning of the workshop, but such prior information helps reduce the likelihood of disappointment, confusion, and disgruntlement.

Written promotional materials should include:
 ❑ a brief summary statement about the Project
 ❑ the education standards to be addressed
 ❑ the target audience: grade level, subject areas, formal and/or non-formal educators, etc.
 ❑ the goals of the workshop and key concepts to be covered

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- who will be conducting the workshop
- the sponsors and/or host
- the date, time, and location (including a map and directions, if necessary)
- if the workshop is two sessions, that attendance is required at both sessions
- the registration fee, paid in advance. (See Fees section in this chapter)
- whether college or district credit is available and at what cost
- what participants will receive: activity guides which are interdisciplinary, correlated to district standards, and supplementary to your existing curriculum
- contact person, including address and phone number for registration or further information
- appropriate clothing
- whether a bag lunch, drink, or mug is needed
- testimonials from teachers who use the guides successfully

Use your imagination to create a flyer, poster, or article that conveys the above information as well as your own unique tone, be that whimsical or scholarly. Logos are available on Resource CD.

Whenever possible, make use of existing communication channels within your organization school, district, or county education system, particularly if you're inviting teachers from more than one school. You may want to include the workshop on your county or district calendar, or in staff development catalogs. School district email is good, as are public service announcements - especially on local cable channel during school board meetings. Sending fliers to schools is possible if district mailing labels are available.

Another possibility is to announce your workshop through the newsletters of various local educational associations, such as local science, social science, or math councils; or environmental education or outdoor education organizations. As with most advertising, word-of-mouth is usually best.

You may wish to send personal letters to key teachers in each subject area, asking them to participate and to spread the word to other key people. Send extra fliers for them to share with others. Sometimes letters are effective; for example, to principals or superintendents asking them to either participate, send a representative, or send a team.

In summary, use whatever format and avenue for announcing your workshop that makes the most sense in your setting.

It will be helpful if you know in advance the number of people who will be attending your workshop. Designate a contact person to keep track of individuals who sign up. To encourage early sign-ups, you may also state "Enrollment is limited," "Registration will be accepted on a first come, first served basis," or "Register by (date)."

In order to make the workshop experience as positive as possible for those attending, you might consider setting a minimum and maximum number of participants. If you do this, make sure you have a way to contact participants before the workshop to let them know they are registered or to inform them in good time if the workshop is canceled.

Facilitators' Recommendations for Marketing Workshops
- ★ Timing - don't conflict with school district or community events.
- ★ Target an audience that has a buy-in and aren't forced to attend such as new teachers.
- ★ Have a good/catchy title - i.e. "Raising CSAP scores with Project WILD".
- ★ Notify participants by email.
- ★ Offer workshop for college or teacher recertification credit *
- ★ Pay for release time for teachers to be able to leave their classrooms.
- ★ Explain that the Project material can be integrated into and correlated with the current curriculum being taught.
- ★ Provide 2 Projects in one workshop.

- ★ Make the workshop "topic" oriented.
- ★ Find a location which is "attractive" to your target audience.
- ★ Advertise the goals of the workshop.
- ★ Advertise the workshop through posters at schools, word of mouth with personal contacts, newsletter announcements, email lists, etc.
- ★ Offer re-certificaton credit

Other Marketing Tips

KNOW YOUR TARGET AUDIENCE
Know who will be at your workshop, and what their needs will be.

SCHEDULE APPROPRIATELY
During school as an in-service day or with release time paid; several weekday evenings; one Saturday (6-8 hours); Saturday and Sunday of same weekend (14-16 hours); or on two consecutive Saturdays.

COST
Free workshops don't reflect enough value -- so charge a refundable ($15) fee. This guarantees more attendance (participants don't get the $ back if they don't show up). Charge a fee and use for supplies, extra goodies or a meal. Check with science coordinator or principal about paying for release time or credit. *

*Regional Coordinators can help you with this.

Arranging for Credit

In a nut shell --
- ★ Teacher recertification credit for workshops is available and a big incentive to teachers
- ★ School district, CDE and university credit is available

Offering credit can be a big selling point to potential workshop participants. You may offer workshops for credit through Colorado State University, Colorado School of Mines, Adams State College, or others if you or your Regional Education Coordinator arrange for it. Depending on the institution, credit may be undergraduate, graduate or "continuing education" (school district/CDE) credit. **Workshops must be 7.5 hours for one-half credit, 15 hours for one credit.** Requirements may vary by institution. For a grade of "A", participants may need to complete a written assignment. Credit types, course requirements and tuition rates vary, so the Regional Education Coordinator will advise and/or assist the facilitator with credit arrangements. Where possible, tuition fees have been negotiated to include a small donation to the Colorado Wildlife Heritage Foundation (See information on "Habitat Improvement Grants" in the Appendix). *Facilitators must assign grades and deliver checks and paperwork to regional Education Coordinators one week after a workshop* to insure prompt delivery to the college or university.

Colorado School of Mines (CSM) has been offering credit for Project workshops for many years. This graduate level "continuing education" credit counts towards the teacher's salary scale increments and teaching license renewal, but is not applicable towards graduate degrees at CSM. Because CSM officials are familiar with our workshops, they do not require that we submit detailed syllabus information or facilitator resumes. Workshop descriptions in CSM course catalogs are distributed widely to schools and individuals throughout the whole state. Advanced planning is necessary, so try to firm up dates and locations 3-6 months ahead.

Participants may sign up for credit either in advance or at the workshop.

In 2011, CSM tuition fees are: 1/2 credit (8 hour workshop) - $35; 1 credit (15 hour workshop) - $50; 2 credits (32 hour workshop) - $80.00; 3 credits (48 hour workshop) -$90.00. At the beginning of the workshop, be sure to announce the requirements and policies for earning grades and obtaining transcripts.

For credit information from Adams State, Colorado State University, and Colorado Department of Education, please check with the State or Regional Coordinator.

K-12 TEACHER ENHANCEMENT PROGRAM
Colorado School of Mines

We provide the following information to assist instructors and/or coordinators in planning for Teacher Enhancement courses to be offered for teacher relicensure credit in Colorado. The Colorado School of Mines abides by all policies and procedures outlined by the Colorado Commission on Higher Education regarding extended studies credit. Please design your Teacher Enhancement course to meet the following guidelines.

CONTACT HOURS
To grant one semester hour of graduate-level relicensure credit, the following minimum contact hours must be met:

> 15.0 hours contact time (lecture/discussion) = 1 semester hour credit
> 25.0 hours contact time (lab) = 1 semester hour credit
> 31.25 hours contact time (field) = 1 semester hour credit

A course involving a combination of instructional formats must include the appropriate number of contact hours in each category to meet the stated requirement.

GRADING PROCEDURE GUIDELINES
The following criteria should be used as a guide in determining a participant's grade in a Teacher Enhancement course. The guide allows for instructor differences in course design, while at the same time maintaining quality instruction as mandated by the Colorado School of Mines.

"B" Grade Requirements
1. Attend all sessions. (Attendance records should be sent to the SPACE office with grade sheets to verify attendance.)
2. Be an active participant in the class.
3. Turn in all assigned work.
4. Satisfactorily complete a course examination (if applicable).

"A" Grade Requirements
1. Meet ALL requirements outlined for a grade of B.
2. Complete a special project as outlined by the instructor (e.g. curriculum development, research paper, journal, etc)

Participants not meeting the minimum requirements for a B grade will receive NO CREDIT.

INSTRUCTORS MAY **NOT** RECEIVE CREDIT FOR THE COURSE THEY ARE TEACHING!

> P.O. Box 4028   GOLDEN, C0   80401
> PHONE: 303.273.3995   FAX: 303.273.3314

ADVERTISING CSM "GRADUATE-LEVEL RELICENSURE CREDIT"

If you decide to advertise your course independently of Teacher Enhancement publications, be sure to refer correctly to the credit offered for your course.

ATTENDANCE POLICY
Course participants are expected to attend each class session in its entirety. This includes arriving on time and staying until dismissal. Credit will only be granted for a course when the full contact hour requirements have been met.

Missed sessions of a course cannot be made up by attending subsequent offerings of the same class or by completing substitute assignments.

SUBMISSION OF GRADES TO COLORADO SCHOOL OF MINES
Grades must be sent to the Teacher Enhancement office within two weeks following the course. (Therefore, grades must be sent to the regional coordinator within one week) **Grades must arrive together**. Do not FAX or call us with individual grades because the teacher is in a hurry. We will enter the whole class in our records system at the same time. In cases where projects are required, additional time will be granted. Instructors should set a definite deadline for project completion. **Please do not withhold submission of all grades while waiting for one or two late projects. An "incomplete" grade can be given while the instructor waits for a project.** The instructor should call Teacher Enhancement at 202.273.3995 to substitute a final grade for an incomplete.

TRANSCRIPT AVAILABILITY
The Teacher Enhancement Office and Colorado School of Mines cannot be responsible for meeting individual deadlines for credits toward teacher relicensure and /or salary increases. Official transcripts for current course work can now be printed upon written request approximately two weeks after the instructor submits course grades to the Teacher Enhancement Office. **Individual letters of completion are not available.**

NOTE: Under **NO** circumstances should children of any age be brought to class. It is inappropriate and unfair to the instructor and the other course participants.

For Project WILD workshop questions about Colorado Schools of Mines Credit, please contact your Regional Education Coordinator as your liaison with CSM.

Correlations to National, State, and Local Standards and Objectives

In a nut shell:
- ★ All WILD activities have been correlated to Colorado Model Content Standards and benchmarks. These correlations will soon be updated to the new Colorado Academic Standards.
- ★ Some have also been correlated with specific district standards, curriculum kits, textbooks and Scout merit and badge requirements.
- ★ All WILD activity guides have been evaluated by (North American Association for Environmental Education) NAAEE's Guidelines for Excellence.

All WILD activities have been correlated to national education standards. In addition, they are now correlated to Colorado Model Content Standards and benchmarks in science, social studies, math, geography, history, reading & listening, and visual arts. Educators can find activity correlations to the Colorado Model Content Standards and benchmarks on the web. Check with your State or Regional Education Coordinator for the URL.

Some activities have also been correlated with specific school district standards, curriculum kits (such as FOSS elementary science), textbooks and Scout merit and badge requirements. Details about these correlations and alignments may be obtained from State or Regional Education Coordinators.

The North American Association for Environmental Education has evaluated the WILD activity guides. The NAAEE reports can be found within the Project chapter. Information about the NAAEE Guidelines for Excellence and reviews of curricular materials may be found at www.naaee.org.

Planning for Food and Beverages

In a nut shell --

Snacks and beverages help participants feel comfortable and welcome. Find out ahead of time whether the sponsoring organization will provide snacks and beverages or if you will be responsible. You may be asked to charge an extra nominal fee for refreshments. Remember to provide a choice of beverages and food to accommodate different dietary requirements. Also find out if the workshop site has equipment for serving food and beverages such as a hot water pot, cups, spoons, or serving trays. If not, you may need to make arrangements for these items.

In an 8-hour workshop, facilitators typically schedule a "working lunch" activity such as group planning or a hike the guide worksheet. This meets the time requirement for college credit and still allows the workshop to conclude an hour earlier than if participants have a "free" lunch hour. Ask participants to bring a bag lunch, or provide a simple catered lunch, or buy groceries for a sandwich, fruit, and cookie smorgasbord. Food and beverage costs may be reimbursed. Contact your State Coordinator or Regional Education Coordinator for further information.

Gathering Equipment and Materials

In a nut shell --
★ Gather and photocopy all required forms, chosen optional forms, Project activity guides ahead of time
★ Obtain workshop supplies from State or Regional Project Coordinators
★ Create or gather visual aids

Decide what materials you and your participants will need to present each agenda item. Find out what equipment is available at the workshop site and how to reserve the equipment you need.

Materials from the State/Regional Coordinator
At least two months before your workshop, send a completed workshop proposal form (see the "Workshop Forms" section of the Appendix) to the State Coordinator and the Regional Education Coordinator. Also, arrange to pickup or receive the workshop materials.

The Coordinator will prepare the following materials:
- ❑ Project activity guides
- ❑ Workshop Participant Survey Forms. During the workshop wrap-up, participants *must* complete this form.
- ❑ All required forms (See "Workshop Forms" section)
- ❑ Facilitator Survey Form. it to the State Coordinator as soon as possible after your workshop
- ❑ Project certificates
- ❑ Other supplementary materials on hand -- including posters, prizes, and giveaways as available

Return all necessary forms to the State or Regional Coordinator within 7 days after the workshop is completed.

Other Materials
Some basic recommended workshop materials include:
- ❑ Masking tape
- ❑ Non-permanent marking pens, different sizes and colors
- ❑ Pens or pencils
- ❑ Scotch tape, glue, string, cones, butcher paper
- ❑ Scissors
- ❑ Pins or tacks
- ❑ Name tags
- ❑ Paper clips, rubber bands

- ❑ Supplies & props needed for specific activities -- blank paper, crayons, or instructions
- ❑ Resource materials for participants, including children's literature that supplements Project activities and related environmental education curricula and guides

Think about any visuals you will need, such as flip charts or PowerPoint projectors, and prepare them before the workshop. Develop a written agenda on a flip chart or photocopies for workshop participants. Consider group size when you choose audio-visual equipment. See "Visual Aides Compared" in the Appendix for more information on choosing visual aide media.

THE WORKSHOP

When you have finished planning and preparing for the workshop, focus your attention on setting up and conducting the workshop. When the workshop is over, do not forget essential post-workshop tasks that need to be completed.

Setting Up

In a nut shell --
★ Arrive at the site at least one hour in advance to set up the workshop space and materials

Allow yourself *at least* 60 to 90 minutes to set up the workshop space. If possible, set up the night before the workshop.

If you are not already familiar with the workshop site, locate restrooms, the quickest or easiest way outside (for outdoor activities), and light switches and plugs for audio-visual presentations. If you will be using any audio-visual equipment, test and set it up in advance. Place signs in strategic locations to help participants find you if necessary.

Remember the arrangement of tables and chairs can help or hinder your workshop. **Arrange the room in a way that will best accommodate your workshop goals.**

Set up materials you will be using so they will be easily accessible when you need them. Establish one table as your "home base" to place items you will need during the workshop such as handouts and materials for the WILD activities you will lead.

Set up a registration table near the entrance with the sign-in sheet, name tags, and pens. You could also have participants write their names on small pieces of paper for entry into a drawing for prizes or extra materials. Make sure that participants write neatly and clearly -- printing in dark ink is preferable. Ask participants to make name tags for themselves.

You may want to set up a separate table to display materials such as children's books about natural resources, completed student projects from previous workshops, and other teacher resources.

Post the workshop agenda where everyone can see it or have copies available for each participant on the sign-in table. Set up a convenient but separate area for beverages and snacks.

Conducting the Workshop

In a nut shell --
★ Personalize the workshop by greeting individuals and calling them by name
★ Make workshop expectations clear to participants
★ Be sure to include essential elements, from greeting to participation evaluation at the end
★ Double check that forms required by participants are completed and legible

Begin the workshop on time to be fair to those who come on time. Throughout the workshop, keep in mind the checklist of facilitator skills (See the Appendix). Keep an eye on the pacing of activities note when participants need a break or a change of events.

Be sure to explain the grading and assignment requirements, if any, for those receiving credit for the workshop. Announce that everyone is expected to remain until the close of the workshop and fill out the evaluation survey.

Try to stay as true to your agenda as possible. Honor the expectations of participants and presenters. It is sometimes difficult to accurately predict the timing of each component of the agenda. Guest speakers expect to be on the agenda at a specific time and for a specified time, and co-facilitators will have spent time preparing their materials in expectation of their time on the agenda. You may be able to shorten the breaks and the lunchtime to catch up with your agenda, but stick to the closing time. If it looks like you need a few more minutes to finish things up, ask participants ahead of time if they can stay an extra ten or fifteen minutes to finish some paperwork. If this isn't an option, figure out how to accomplish all necessary tasks and let people leave on time.

Be sure to reserve time at the end of the workshop for participants to fill out the Participant Survey Forms. In exchange for the completed forms, participants may receive their certificates. Collect one survey for each activity guide distributed.

Check the completion and clarity of all forms submitted by participants. Return the site to its pre-workshop condition, cleaning up and hauling trash if necessary.

POST-WORKSHOP TASKS

When the workshop is over, pat yourself on the back! Then take time immediately to do the following tasks.

Send Workshop Forms to Regional Coordinator

Within 7 days after the workshop is completed, mail all checks and completed forms to the Regional Education Coordinator:

- ❑ the Workshop Registration Form
- ❑ the Facilitator Report Form
- ❑ the Facilitator Accounting Form
- ❑ one Participant Evaluation Survey per participant
- ❑ the Facilitator Stipend Authorization Form (if applicable)

- ❑ the completed Book Inventory
- ❑ checks (if any) for the workshop fees, made out to the correct payee
- ❑ checks (if any) for tuition, made out to the accrediting college or university
- ❑ a copy of the agenda and any publicity materials used

Evaluate the Workshop
Spend some time evaluating the workshop for yourself. Write down your thoughts, or use the Facilitator Skills Checklist in the Appendix as a guide. Have a debriefing meeting with the co-facilitator. These personal notes will be helpful to you when planning future workshops.

Participant Feedback -- *Read the participant survey forms before returning them to the State or Regional Coordinator to find out what went well and what did not from the participants' perspective. This information provides a way to gauge the program's strengths and weaknesses and make improvements next time.*

Workshop Records

State and national program files are maintained on all workshops, participants and facilitators. These data files are used for the mailing lists of newsletters, calculating matching time for grants, facilitator records, etc. Facilitators should review participant registration forms and evaluations for completeness and legibility.

Additional Follow-up (Optional)
The extent of your post-workshop follow-up will depend on your available time and resources. Try to arrange at least one follow-up contact with participants -- a phone call, note, or survey.

If time permits, a thank-you note to each participant along with a summary of key concepts and a list of names and addresses of the workshop participants is appreciated. If you assigned written homework, it's nice to make comments and return it, if possible.

TOPIC-CENTERED WORKSHOPS

In addition to introducing Project materials, your workshop should be a vehicle to help teachers learn new teaching strategies and techniques.

Theme Workshops
If you think your audience would be interested, you may decide to use one of the following topics as the focus or theme for a particular workshop (or create your own):

- ❑ Early Childhood Workshops
- ❑ Cooperative Learning Demonstrations
- ❑ Learning Styles and/or Multiple Intelligences
- ❑ Activities for Specific Standards and Benchmarks
- ❑ Addressing Controversial Issues
- ❑ Leading Successful Outdoor Activities
- ❑ Bilingual
- ❑ Prairie Wildlife
- ❑ River or Watershed Workshop
- ❑ Scouts - Activities to earn badges

- ❑ Partner with another agency/organization, focusing on their theme. For example, at the "Butterfly Pavilion" emphasize bugs.
- ❑ Special event workshops - i.e. Project WILD for Earth Day.
- ❑ Thinking Processes
- ❑ Cooperative Learning
- ❑ Learning Styles
- ❑ Fire or Forest Health
- ❑ Literacy
- ❑ Leading Successful Outdoor Activities

Combined Workshops
You may also determine that the audience's time is best spent learning about more than one of the Projects in a workshop. The workshop format and history of WILD, WET, PLT and FLP are similar, and they were all developed using complimentary conceptual frameworks. They have been all been correlated to Colorado Education Standards, and they are indexed by similar skills and natural resource topics.

Multiple project workshops must contain a minimum of four activities and 6 hours must be included for each Project. One way to develop a combined workshop agenda is to provide a separate block for each Project (i.e.: 6-8 hours of PLT and 6-8 hours of WILD, or 6 hours of WET, 6 hours of WILD and 6 hours of PLT).

ICEBREAKERS

Icebreakers are an important part of your workshop. They set the tone for the workshop by getting everyone up and participating. They are also a great opportunity to model an additional activity. Several of the samples below are activities that can be adapted for Icebreakers. Do make sure you include introductions.

☐ **"How Am I Different?"** Each person gets an index card and lists two things about himself or herself that are "different." Collect the cards and re-distribute them. With the new card in hand, participants ask indirect questions to find the person on their card. Then, they introduce their new friend.

☐ **Headbands.** Make matching pairs of headbands with commands, such as whistle, hop on one foot, pat me on the back, etc. Place the headbands on each attendee and tell them they can't look at their own. While everyone is mingling, they must do what the other person's headband says. A person finds their "match" while they both do the same thing. They will introduce their partner.

☐ **Meet My Friend.** Although this game is enjoyable in any getting acquainted situation, it is most valuable in a group which contains subgroups of players who already know each other. These subgroups are quickly broadened and interconnected when each member gets to know one new person. Meet My Friend helps to form bonds of friendship between two individual players as well as providing an introduction of all players for the entire group.

   The players pair off with someone they do not know. For 3-5 minutes they tell their partners about themselves (name, hobbies, home, interests, favorite foods, favorite color, etc.) The listening partner may ask questions. At the end of the designated time, the roles are reversed with the listening partner now answering questions and telling about himself. When time is up, all players are introduced to the entire group by their partners.

   In a smaller group, you may change the activity so that when the person is introduced their partner tells a lie about them in the introduction. The group must then try to figure out which 'fact' about that person is a lie.

☐ **Glossary Charades.** Choose an appropriate number of terms from the Project Activity Guide glossary and write them on separate 3" x 5" cards (number of terms should equal half the number of participants). Pair up the workshop participants and hand out a card to each pair. Each pair will need to come up with a means of acting out their definition for the rest of the group, and the rest of the group will need to guess what the term is. Before each pair performs their charade, have them introduce themselves.

☐ **Web of Life** - All participants stand or sit in a circle. The first person holds onto one end of a ball of yarn and names something that is part of the ecosystem (e.g. the sun). The first person throws the ball of yarn to another person, and that person has to name something that needs the sun (e.g. trees). The 2nd person holds onto the yarn and throws the rest of the ball to another person in the circle until everyone has a piece of the yarn and has named an item that is part of the ecosystem.

☐ **People Scavenger Hunt.** When people first meet, they often ask ordinary and formal questions of each other: "where do you work?" or "Where do you go to school?" or "Where do you live?" etc. Unless the responses strike an area of common interest, the conversation is likely to hit a dead end. The People Scavenger Hunt allows participants to skip over this awkward stage and get into the interesting details immediately. Questions such as "Do you like eggplant?" or "Can you stand on your head?" are right at home in a People Scavenger Hunt. Once the feelings of informality, fun, and interest in one another are established within the group, it is easier for individuals to continue the process of getting acquainted. The game has infinite adaptations. Although the list below has been developed primarily for teachers, items can be added and subtracted to make the list appropriate for children, teens or adults.

   Each player is given a copy of the scavenger hunt and a pencil. The players then mix in the group, asking questions and writing the name of a qualifying person beside each item. When most players have completed their lists, the leader goes through the items with the entire group, introducing for example, the gerbil owners and encouraging them to add information about themselves.

   Sample List -- Someone who:

Is an Aquarius	Buys organic food
Has lived in a foreign country	Has written a letter to the editor
Rides a bicycle to work	Has been camping in the past year

Project WILD & Aquatic WILD

☐ **First Impressions.** (*Project WILD*) Pictures of animals, people record their first impressions, then research animal then share their impressions with the group. ***Or*** - Players sit in a circle and the leader announces a category (for example, the ocean). Each member of the group then studies the person to his/her right and announces what kind of ocean plant or animal that person would be.

☐ **Who Am I? (***Aquatic WILD***)** - All participants must wear name tags. Have everyone stand in a circle facing the center. The leader will walk around the outside of the circle, placing a 3x5 index card on the back of each participant. Each card is labeled with the name of an item being studied (e.g. an animal). The participants' task is to question each other to obtain clues as to what you are. Only "yes" or "no" answers are permitted. It is like "Twenty Questions."

WORKSHOP PROPOSAL
Project WILD   Growing Up WILD   Flying WILD

> **Two months before your next workshop mail this form to your Regional Education Coordinator, who will forward it to the appropriate partnering agency.**

Type & length of Workshop (WILD, GUW, HS, bilingual, etc.)**:** _____

Lead Facilitator: _____

Phone: (home) _____ (work) _____

Co-Facilitator: _____

Co-Facilitator: _____

Location:(City) _____ (Facility Name) _____

Site Contact: _____ **Phone:** _____

Date(s) of Proposed Workshop: _____

Time(s): _____

Special Goal of Workshop (if any)**:** _____

Fees (if any, please explain):

_____

_____

Proposed Number of Participants:(minimum) _____ (maximum) _____

Audience:

___Public School (primary, secondary)   ___Natural Resource Professionals

___Private/Home School (primary, secondary)   ___Volunteers for Resource Agencies

___Pre-Service Teachers/Students   ___Other:

___Environmental Educators

Credit Available (Y/N)**:** _____ **From Which Institution:** _____

Assistance needed with advertising and promotion?_____ **Workshop open to the public?** _____

Number and kind of activity guide do you plan to distribute? (FILL OUT CHART ON BACK)

Additional Needs (please list here):

_____

_____

_____

> **Please check with Regional DOW Education Coordinators prior to setting up a workshop to avoid conflicts with other workshops or events and to arrange for Wildlife, Agriculture, Water, or Forest Service personnel at your workshop.**

PLEASE INDICATE HOW MANY AND WHICH BOOKS YOU NEED FOR YOUR PROPOSED WORKSHOP.

D- The Workshop   2011

Name of Book	Number requested
Project WILD	
Project WILD Spanish	
Project WILD Aquatic	
Project WILD Aquatic Spanish	
Flying WILD	
Growing Up WILD	

Any other comments or requests?

_____

_____

Workshop Forms

These are the forms that we currently require:
Workshop Reporting Form
Workshop Registration Form
Participant Evaluation
Teacher Enhancement Course Application
CSM Course Credit Form
Return Paperwork Check-Off
Facilitator Workshop Accounting Form

EVALUATION OF ACTIVITY

How well did it work?

Through the years the projects have been refined by incorporating suggestions made by teachers using activities with their students. Use this form to submit feedback/suggestions you might have after you have completed an activity. Return to your facilitator or the state coordinator. You may attach additional sheets of paper.

Name: _____ School Name _____

Grade level taught:_____ Number of Students:_____ Date:_____

Name of Activity:_____ From which Activity Guidebook:_____

1. Did you feel the objective met your needs? If no, why not?

2. If you used any materials, were they all listed? If not, what was missing?

3. Did you find the procedure section sequential and informative? Please list any modifications you made to this activity or procedures.

4. Please list all of the positive outcomes of your chosen activity.

5. Please list any negative outcomes not already mentioned.

 6. How and why did you choose this activity?

7. Additional comments?

Possible Participant Homework Assignment

CURRICULUM PLANNING WORKSHEET

Age/grade level you usually work with:_____

Curriculum Topic	Specific Math, Reading or Writing Standards Addressed	Activity Name

CO-FACILITATORS WORKSHEET

As you begin to plan a workshop with a co-facilitator, think about questions such as these and share them with each other to help you clarify your roles.

☐ Which parts of the workshop would you like to be responsible for? Which parts do you want your co-facilitator to handle? (e.g. location reservation, promotion of the workshop, supplies, presentations during the workshop, follow-up)

_____

_____

☐ What elements do you want to include in the workshop because of their importance to you, or because they worked well in other workshops, or for another reason? What elements are important to your co-facilitator?

_____

_____

☐ What signal could you use for interrupting when the other person is presenting?

_____

☐ How will you handle staying on task and keeping to the schedule?

_____

_____

☐ For each portion of the workshop, how will you field participant questions?

_____

_____

☐ How will you make transitions between each of your presentations?

_____

_____

☐ How will you get participants back from breaks in a timely manner?

_____

POSSIBLE MEETING LOCATIONS and CO-HOSTS

Nature Centers   _____

Schools   _____

Churches   _____

Community Centers   _____

Colleges and Universities   _____

Municipal Buildings   _____

Local Recreation Centers   _____

County Extension Service (4-H)   _____

Colorado Parks and Wildlife   _____

Service Clubs (Kiwanis, Rotary, Lions, Elks)   _____

Banks and Business Meeting Rooms   _____

Rural Electric Associations   _____

Fire Departments   _____

Libraries   _____

Other Ideas _____

_____

_____

_____

_____

LOCAL RESOURCES

University Scientists   _____

County Resource & Conservation Districts   _____

Irrigation Districts   _____

Agriculture Groups   _____

Environmental Groups   _____

County Extension Service (4-H)   _____

Colorado Department of Natural Resources   _____

Colorado Parks and Wildlife   _____

Colorado Dept of Public Health &Environment   _____

US Fish and Wildlife Service   _____

US Forest Service   _____

National Resource Conservation Service   _____

US Department of Agriculture   _____

US Bureau of Land Management   _____

US Bureau of Reclamation   _____

Municipal Water & Wastewater Treatment Facilities _____

Electric Utility Companies   _____

Private Consultants   _____
    (e.g. Hydrologists, Foresters, Biologists)

Other Ideas _____

_____

APPENDIX

1

FACILITATOR SKILLS

Your effectiveness as a facilitator will be tested in three distinct phases of conducting a workshop -- **PREPARATION, COMMUNICATION SKILLS, LEADERSHIP SKILLS**. A group at a recent workshop brainstormed a checklist and discussed some of the important elements that the facilitator should consider in each of these phases.

Preparation:

❑	Is your team **organized**? Have you delegated responsibilities to all?

❑	What are your **audio-visual** needs? Are they ready to go?

❑	What about **location**? Atmosphere and setting are important.

❑	How about your **timing**? Do workshop dates conflict with other events?

❑	What is your **budget**?

❑	Will the workshop be offered for **credit**? Have you done all the necessary paperwork?

❑	Do you have common workshop **materials** (i.e. flip-charts, markers, tape, pins, name badges, etc.)? See workshop materials checklist.

❑	Have you completed adequate **publicity**? Does it stand out from the million other flyers? Do you have enough attention-getters to capture interest?

❑	Have you made all **contacts** possible for workshop logistics, support, resources, resource people, and participants?

❑	Are you planning with enough **lead time**?

❑	Have you made **contingency plans** for inclement weather or other unforeseen problems?

❑	Have you prepared **handouts**? Will you have enough?

❑	Have you made **faulty assumptions** about your audience, or arrangements, or responsibilities, or logistics, or anything else which could backfire and cause problems?

❑	Have you made clear **goals, objectives** for the workshop?

❑	Is your agenda or **schedule** complete?

❑	Have you contacted **news media**?

❑	Have you communicated at staff meetings? Established **key contact people** in school systems or other important organizations? Done a staff development announcement? Made proposals to administrators?

❑	What about getting to **substitute teachers**? The Projects are great tools for them.

❑ Will you provide **freebies** (or at least addresses about where to obtain them)?

❑ Have you actually **visited the location** to personally check out the facilities? Surprises are no fun.

❑ Has your team tried a dry run, so they are **relaxed and confident** with one another -- and sure of the "choreography"? Is there evidence of teamwork which translates into positive energy?

❑ **Other Considerations**:

Communication Skills: These are basic skills that each facilitator brings with him/her to the workshop. They can be improved and developed by the individual over a long period of time, but will be called upon to actually be in use and on display during the workshop. Therefore, a confidence in these skills is crucial if the facilitator is to be effective. Not everyone will possess ALL these skills -- some will be better developed than others, but through teamwork, members of the team will come to understand one another's' strengths and weaknesses -- and probably will being "covering" for each other.

❑ **Greet arrivals**. Arrive early so that you will be prepared to greet and visit with participants as they arrive.

❑ **Enthusiasm**. It is VERY important that facilitators show to their audience that they are excited, committed to, impressed, and enthusiastic about the material they are presenting.

❑ **Eye Contact**. The audience must know you are interested in them.

❑ **Knowledge of Audience**. Facilitators must be well-aware of who makes up their audience so they can communicate directly to specific needs, wants, age differences, value differences, learning styles/needs, etc.

❑ **Knowledge of Material**. This is important for credibility, but don't be afraid to say "I don't know," and then go and find out the answer.

❑ **Listening Skills**. Understands the power of waiting for the group to respond. Is not afraid of silences. Welcomes questions and does not become defensive. Accepts and encourages different points of view. Makes no judgments but seeks to clarify and refine what is said. Picks out focus topics and extends them into the flow and general direction of the discussion. Can tactfully re-direct discussion by use of questioning and summarizing if it gets off-track.

❑ **Repeats Questions** so all can hear.

❑ **Speaks Clearly and Loud** enough so even those in the back row can hear.

❑ **Constantly on the Alert**. Are you meeting the needs of your audience? Or do you need to take another approach to recapture their interest?

❑ **Non-Verbal Cues**. Are you remembering to present yourself in a relaxed and non-threatening manner? Is your audience at ease with you? Are your gestures compatible with the message you are trying to convey?

❑ **Involvement**. Be sure you are relating to your audience. Are you using examples which involve your audience? Are you considering how their experiences and attitudes relate to the material you are presenting? Do you assume that most of the people have something to contribute? Are you able to involve those who don't participate?

❑ **Delegate Responsibility.** Be able to abandon your "professor who knows all" role in favor of a discussion leader role. Are you drawing upon the expertise and experience of others present?

❑ **Tact**. It is important to be firm and assertive without conveying a sense of arrogance or superiority.

❑ **Transitions**. Linking together various parts of the discussion is an art in itself. Be certain the listener(s) is "following" your lead if you switch gears or head off in another direction of the discussion. Know how to generalize and summarize discussion points that provide a smooth verbal transition.

❑ **Draw on Assets**. Know your own strengths and the strengths of your other facilitators. Learn to quickly recognize strengths of those in the audience.

❑ **Know Your Own Style**. BE YOURSELF. Your audience will be more at ease if they sense you're not struggling to maintain a style with which you are not really comfortable.

❑ **Flexibility**. Be ready to "change flows" to better meet the audience needs and be prepared with contingency plans if possible.

❑ **Be Organized**. Know what you want to do and how you intend to get there. Note that this doesn't mean rigid -- see flexibility above.

❑ **Media Skills**. It's boring and uncomfortable for the audience to watch someone fumble around with audio-visual equipment. Be sure you know how to operate the equipment (including what to do if something goes wrong) or have someone handle it who does know how.

❑ **Summarizing**. Know how to capture and review what has been said in a quick, concise manner. This should be done at many various "critical" points during the discussion as well as at the end during the final wrap-up. Try to achieve closure through a common mental bond of all who took place in the discussion. Define and point out areas of agreement, clarify areas of differences.

❑ **Feedback**. Do you ask for feedback to assess whether the participants are getting the message?

❑ **Unbiased**. You should find a way to share your opinions and views with your audience WITHOUT an air that you are "absolutely right". This is very important to your credibility and believability. Avoid soapboxes.

❑ **Punctuality**. Lead by example - be sure you are on time and that your schedule is reasonably being followed.

❑ **Other Considerations**:

Group Leadership Skills: These skills are an extension of interpersonal communication skills -- but important to remember because of the group dynamics which inevitably take place during a workshop. The participants of a workshop will respond better and gain more if they feel some kinship and camaraderie with the other participants. In short, the success of the workshop depends to a large extent on the reactions and responses of the audience as a group. Here are some ideas to consider which will help facilitate positive group dynamics.

❑ **Physical Activities**. Structure your workshop to include activities which make people get up out of their seats and PARTICIPATE. Don't force them to constantly sit and be spoon-fed the material.

4

- ❑ **Provide for Different Learning Styles**. Some people must experience something first-hand before they understand how something works -- others can understand something simply by listening -- while others must see a demonstration and follow up by reading about it. Remember to make an attempt to accommodate for as many different learning needs as is practical.

- ❑ **Personalize for Audience**. Draw the group's interest and be sure to relate to the group. Sometimes you can identify a particular persona who is tuning in well and seems to be liked by the rest of the group -- and then come back every so often to that person for actual examples. Other times, it is effective to simply ask the group to provide discussion issues or specific examples to make your points come alive.

- ❑ **Fun**. Learning is a lot easier when you are enjoying the experience! Don't forget to have fun as a facilitator, don't forget to include some time and activities in which the participants can fully enjoy themselves.

- ❑ **Challenge Their Imagination**. An effective tool can be to challenge your group (gently). This should be used in moderation (don't forget they are trying hard to absorb a lot of information and they really haven't had much time to process that information enough to form conclusions). But if you can challenge their imagination and allow them to begin "creating" ideas and concepts as a group, you will see magic happening!

- ❑ **On Time**. Keep the agenda on schedule as much as possible. Don't allow a few chronic stragglers to make the remainder of the eager group to constantly wait on them.

- ❑ **Makes Transitions Smoothly.** Plans transitions between activities.

- ❑ **Sharing and Feedback**. Be certain you allow the group to share their ideas, questions, concerns, etc. with one another and with you as facilitator. This is one way of assuring that they are actually tuning-in and participating.

- ❑ **Networking**. Allow opportunities for people to make lasting contacts with one another that they will use as support in the future. Too often, they leave as mere acquaintances -- and that's a waste of a good resource.

- ❑ **Follow-up**. Possibly the single most important facet of facilitation. This is your chance to reinforce, to clarify, to answer the unanswered. Don't drop the ball!

- ❑ **Respect and Trust**. Have you gained the respect and trust of the group? The sooner you do, the sooner the real learning begins.

- ❑ **Setting**. Are empty seats creating "energy holes"? Is the arrangement of furniture inhibiting a free flow of communication among the group? Is the room too hot or too cold? Do you need a few more stretch breaks to get the blood flowing after lunch? Etc.

- ❑ **Group Size**. Do you have techniques for involving large and small groups meaningfully? Do you know several techniques for breaking large groups into smaller groups?

- ❑ **Expectations**. Have you created early expectations within the group? Are you now fulfilling those expectations?

- ❑ **Self Correcting**. Do you have your finger on the pulse of the group? Are you correcting and being flexible in whatever ways necessary to stay one step ahead and maintain your leadership role? If you've "lost" your audience momentarily - do you know how to get them back on your wavelength again?

- ❑ **Reflection Time.** Encourage participants to reflect on the experience and verbalize any learning and accomplishments. Provide follow-up suggestions and next steps.

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❑ **Re-assessment**. Review and critique the job you did when it is over. What can you improve? What would you have done differently?

❑ **Other Considerations**:

Road Blocks to Communication

1. ORDERING, DIRECTING, COMMANDING: Telling the other person to do something… giving him/her an order or command.

2. WARNING, ADMONISHING, THREATENING: Telling the other person what (dire) consequences will occur if he/she does something: alluding to the use of force.

3. MORALIZING, PREACHING, OBLIGING: Telling the other persons why he/ she how to solve his/her problem.

4. ADVISING, GIVING SUGGESTIONS OR SOLUTIONS: Telling the other person how to solve his/ her problem.

5. PERSUADING WITH LOGIC, ARGUING, INSTRUCTING, LECTURING: Trying to influence the other person with facts, arguments, logic, information or expert opinion that happens to agree with your own.

6. JUDGING, CRITICIZING, DISAGREEING, BLAMING: Making negative judgments or evaluations of the other person.

7. PRAISING, AGREEING, EVALUATING POSITIVELY, APPROVING: Offering a positive evaluation or judgment. (Usually condescending, sometimes sarcastic).

8. NAME CALLING, RIDICULING, SHAMING: Making the other person feel stupid, outcast, foolish, stereotyping or categorizing.

9. INTERPRETIVE, ANALYZING, DIAGNOSING: Telling a person what his motives are, or analyzing the whys behind what he is doing or saying, or communicating that you have him figured out, psyched out or diagnosed.

10. REASSURING, SYMPATHIZING, CONSOLING, SUPPORTING: Trying to make the other person feel better, trying to either talk him/her out of feelings or make them go away, or denying the strength or significance of feelings.

11. PROBING, QUESTIONING, INTERROGATING: Trying to find reasons, facts, motives, causes, information to help you solve the other person's problems.

12. WITHDRAWING, DISTRACTING, HUMORING: Trying to get the other person away from his problem, or getting away from it yourself, or trying to change the focus by kidding, offering other things to do, pushing the problem away.

The usual effects of the Typical Twelve are that they tend to…
… block communication
… hurt the relationship
… imply a desire to change or modify the other person
… take responsibility from the other person
… cause resentment and defensiveness
… carry hidden messages ("You're too dumb to know what to do")
… cause other persons to withdraw

The Effectiveness of a workshop is the convergence of two elements:

EDUCATIONAL STYLE

- ✓ Be aware of different learning styles: visual, reflective, active, experimental
- ✓ Utilize interactive, hands-on activities
- ✓ Include both group and individual learning opportunities
- ✓ Build concepts around a unifying theme
- ✓ Incorporate two-way learning; value and use participants' expertise
- ✓ Model behavior and activities
- ✓ Allow time for absorbing, processing, and reflecting
- ✓ Help participants reach their own potential

PERSONAL STYLE

- ✓ Relaxed and confident
- ✓ Friendly and respectful
- ✓ Knowledgeable and curious
- ✓ Positive and enthusiastic
- ✓ Warm and humorous
- ✓ Open to questions, comments, discussion
- ✓ Fun

ADULT EDUCATION
Program Planning and Design

When Do Adults Learn?

1. When they feel comfortable.

2. When they feel respected.

3. When they're allowed to make mistakes.

4. When they can have some fun.

5. When they have a distinct need to know something.

6. When the content is meaningful and relevant.

7. When they can use their experience in the learning situation.

8. When they are allowed to learn in the way that suits them best.

9. When the process is highly interactive and participatory.

10. When they are allowed to evaluate and especially to evaluate themselves.

Five Differences Between Adults and Children as Learners

1. Adults want to learn something they can use right away; much of what children learn is meant to be used throughout their life.

2. Adults bring a wealth of experience to a learning opportunity, past experiences, opinions, and ingrained habits. In comparison, children's life experiences are very limited.

3. Adults know what they want to learn; children often don't.

4. All adults learn differently and at different rates. They like diversity. Children's learning styles can be different, but they are at similar developmental stages.

5. Adults are most easily persuaded by the opinions of many, not just one.

Remember: Enthusiasm and attitudes are caught, not taught!

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Changing Ideas and Behavior

How new ideas are adopted and become standard behavior:

1. *Knowledge Stage.* What is the idea? How does it work? How well do I understand it? Implication: You must communicate the idea clearly.

2. *Persuasion Stage.* What is the advantage of the idea? Should I try it? What are others doing? Implication: You must be persuasive.

3. *Implication Stage.* I'll try it. Implication: You must be prepared for trial periods.

4. *Confirmation Stage.* Did it work? Is it worth it? Should I continue to do this or go back to my original idea? Implication: You must be prepared to do follow-up.

Remember, by using adult education techniques, you can teach an old dog new tricks!!

Understand What Makes People Change Their Behavior

People change when:
- They've had a personal discussion with someone about the new behavior
- When there is peer pressure to engage in the new behavior
- When they've verbalized a commitment to a behavior
- When they know that their personal action will make a difference
- When they have a chance to practice new behavior

Design your education program to:
- Take place close to the targeted behavior
- Relate to a specific product or behavior
- Be eye catching, i.e. bright and humorous
- Provide details on how to do the exact behavior required to meet your objectives
- Reach people in multiple ways, i.e. plan for store posters, store shelf stickers, individual product information pamphlets, press releases, and speakers' bureau as components.

LEADING SUCCESSFUL OUTDOOR ACTIVITIES

Taking students outdoors allows them to personally examine and experience the natural world. These experiences are critical for helping students understand the world around them. However, many educators shy away from outdoor activities because these activities present management problems. For example, when students leave their familiar classroom for an outdoor activity, they often assume that the classroom rules no longer apply.

To help educators become more comfortable with leading successful outdoor activities, provide ways of addressing this issue in your workshop. Following are some suggestions.

☐ At the workshop introduce participants to the outdoors, and help them see the importance and advantages of working outside. After each outdoor activity, discuss how the activity and the learning would have been different if it had been conducted indoors.

☐ Have participants brainstorm a list of the pluses and minuses of leading outdoor activities. Divide participants into small groups and have them think of ways to turn the minuses into pluses.

EXPLORING NATURE WITH YOUR STUDENTS

Many of us hesitate to go outside with our students because we feel that we know so little about the plants and animals around us. But names and quantities of information don't tell us much about the way an animal moves or how it fits into its environment. WE learn about our world by watching quietly, listening with open eyes, ears, and hearts. So, relax… Enjoy the day. Listen to your adventurous spirit. Watch the sparkle in your students' eyes as they explore and discover. Let your imagination and enthusiasm guide you. Your students will be right with you. The following suggestions are adapted from "Clearing" magazine.

Learn with Your Students
Don't feel like you need to be a "walking encyclopedia" of facts to lead a good field trip.   Instead, be an enthusiastic facilitator, rather than a boring lecturer. Don't be afraid to say, "I don't know, but let's find out together!"

Label Last
We are a culture of labelers. Once we know the name of something, we put it in a neat little box, and begin searching for something new… Names do not stay with you as much as a feeling, image, or sensation from a discovery.

Use Questioning Skills
Discussions are better than lectures at encouraging participation and involvement from a group. Open-ended, stimulating questions encourage independent and critical thinking. "Why does this animal live here?" "What would you need to live here?" "Does this animal have anything that helps it live here?" These are examples of questions that promote thinking and group interaction.

Reinforce Discovery
When a student brings you a bone, rock, insect, or scat, this is the most important thing in the world to him or her. Responding with interest and enthusiasm will mean than any label or identification. Call the group together to share their finds. Be sure to have pre-established rules about collecting things. It is better to bring the students and you to a treasure, than to pick it up and bring it to you.

Caretaking
Be the voice of the plans and animals. In their eagerness to get close and learn, students can get careless. Help them to understand that the beautiful flower holds the seeds for future flowers. Without it… Explain how that pretty rock is actually part of the shelter for a spider or a salamander. Removing it may jeopardize the future of that creature. Do your best to inspire the children to observe and appreciate wild things as they are, in their homes, in their places in the water or on the ground. Pockets are for hands, not collectibles.

Take many memories… Leave only footprints

FACILITATION BITS AND PIECES

CIRCLES, NOT SQUARES - Whenever possible, arrange chairs or tables with chairs in a semi-circle or "U" shape. The semi-circle arrangement facilitates participation which is all-important in the workshop. It also allows everyone to see everyone else's face and name tag. Everyone can hear better what others are saying. No one is looking at the back of someone else's head. Remember that we all learn from each other in a workshop, so it is important that all participants can see and hear everything that is going on. If there is insufficient seating in a "U" shape, you can place tables in a fan shape with people sitting on both sides.

MURPHY'S LAW - Be prepared for the unexpected. For example, if you have chosen outside lessons, be prepared to do them inside if it rains, or have an alternate lesson prepared. You can never outguess what might happen, but if you have prepared carefully and stay flexible during your workshop, you can deal with whatever comes up.

NUMBERS - In general, you should require a minimum of 15 attendees for a Project workshop. Because our lessons are done in groups, it is difficult to do activities successfully for fewer people. A maximum of 35-40 attendees is the most you should try to handle. (If you get more than that, break them up into two groups and run two simultaneous workshops by bringing additional facilitators.) A good rule of thumb is to use one facilitator for every 10-15 attendees.

PACK YOUR OWN BAGS - When you are putting your workshop equipment and supplies together, be sure to pack it yourself so you will know where everything is. Use a checklist! It is a good idea to put all your papers and workshop "goodies" out on a table when you first arrive. When you need them, they are right at your fingertips and you don't waste time or appear unprepared by searching through boxes.

WORKSHOP PARTNERS - Never try to do a Project workshop alone. First of all, what if you get sick or your boss says you can't go? You lost the workshop, and will probably never be able to get it rescheduled. Second, the standard for Project workshops is that each workshop has at least one resource person and one educator as facilitators. This provides balance and diversity. Third, it is simply better for your attendees if there is a variety in styles, voice levels and personality in the facilitators.

THE SPICE OF LIFE - Arrange your workshop agenda so the active parts are interspersed with the "sitting and listening" parts. Also, be sure to select lessons that reflect a variety of learning styles. Change facilitators from section to section to provide even more variety. If you have a partner or team with whom you frequently do workshops together, change roles from workshop to workshop so that each of you learns each part, and you don't get stale.

DON'T PREACH TO "TEACH" - Always treat your participants like the adults and professionals they are. Never attempt to tell them how or what to teach! Let them make their own judgments about *The Projects*. Urge them to think about how they might use The Projects in the context of what they teach.

BE NOT AFRAID - At the same time, there is no need to be afraid to work with educators.

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Your job is to provide them with a valuable resource, and to demonstrate its use.

NAME TAGS -- USE 'EM - Name tags are very important. Even if you are doing a workshop with teachers who all know each other, do you also know everyone? If you don't use name tags you may find yourself pointing at people rather than using their names. Name tags can be of any variety, but should be large enough to read from the front of the room. First names are all that is necessary. It is best to have name tags made up ahead of time, but if this isn't possible, assign one person to make them so they are uniform and easily legible. If you ask people to make their own name tags, there will inevitably be some who write a tiny little name in the corner of the tag!

EAT FIRST! - Carefully evaluate the time when you give out the Project Activity Guides. Some participants may find an excuse to leave after they receive it or if there is an extended lunch break. They already have what they came for! If your workshop is set for more than one day's session, you need to decide if you should pick the materials up at the end of the first day, and give them back out during the next session. You may also ask them just to leave them in the room overnight. This can be a controversial problem and often it can be overcome by emphasizing the length of the workshop before or at the beginning and stating that full attendance is required to receive the materials.

TALK OUT, NOT DOWN - Use common, everyday language that everyone will understand. If you're a scientist, don't assume the participants will know what a term means, instead describe it to them. You don't impress anyone with your knowledge if they don't know what you're talking about. Remember that you are dealing with educators. Watch your grammar and your spelling!

CAN THE COMMERCIALS - When you conduct a Project workshop, your only job is to train the educators in using the Project materials. Do not use the opportunity to try to influence your audience about cropland protection or chemical use, your employer, or your own personal agenda. Introduce yourself and your professional affiliation and let that be it. The fact that you are there, and your employer allowed you to be there, speaks for itself. If you do attempt to "brainwash" your audience, it will backfire on you every time.

TEACHER'S PETS - Don't hone in on one or two participants because you are drawn to their personalities. Treat everyone equally. Don't pick on participants either, not even in fun.

From Project Food, Land & People "Bits and Pieces," 1998.

E- Appendix

Using Learning Styles for Effective Presentations

Feeling,
Concrete experience

DYNAMIC

So What

Favorite question:
What can be done with this?
How is this important to me?

Characteristics exhibited:
Want to try it out.

Likes/preferences:
Risks
Change
Action

What they need to know to make decisions:
Carry out plans
Verbal reports
Explain delivery mechanism

IMAGINATIVE

Why

Favorite question:
Why are we doing this?

Characteristics exhibited:
Idea people
Asks questions
People person
Learns by listening and sharing

Likes/preferences:
Discussions
Prefers charts, maps, pictures
Uses analogies

What they need to know to make decisions:
Give them a reason
Big picture
Timeline important

Doing,
Active
experimentation

4 | **1**
3 | **2**

Watching,
Reflective
observation

How

Favorite question:
How does this work?

Characteristics exhibited:
Practical application of ideas
Need hands on
Responsible

Likes/preferences:
To be in control
Looks for a single, correct answer
Reality
Short and to the point

What they need to know to make decisions:
Identify problem to be solved

What

Favorite question:
What do the experts think?

Characteristics exhibited:
Thorough
Organized
Reads everything
Planner

Likes/preferences:
Charts and graphs
Creating concepts and models
Data collectors

What they need to know to make decisions:
Information
Prefers lead time and clear expectations

PRACTICAL

ANALYTIC

Thinking,
Abstract Concepts

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A Guide to Educational Terms

The word is	Most people think it's	But really it is
alternative assessment	What we all prayed for in college	A set of assessment strategies that include more than pencil and paper tests: i.e. portfolios, anecdotal records, rubrics, behavioral checklists, and task performance
authentic assessment	A really hard test	An alternative assessment that the student decides to do to demonstrate knowledge gained about a topic: often used to mean alternative assessment
benchmarks	The wet spot you leave if you sweat where you're sitting	A general description of what knowledge a student should have about a topic (see curriculum objective)
concept	A Hollywood invention used to sell TV shows	An idea that has a set of characteristics which differentiate it from other ideas: trees, natural resources and freedom are concepts
constructivism	Something you do with Legos or other building toys	A belief and practices that people learn by "building" their own knowledge through experiences
cooperative learning	When the student does what the teacher says	When students work in groups to accomplish a task; differentiated from regular group work by the way the teacher assigns the tasks and assesses the finished product.
curriculum	Something no one ever looks at	A detailed description of exactly what students will learn at each level of instruction; related to frameworks
curriculum objective	The parts of the curriculum no one likes	A series of statements that pinpoint exactly what the student must learn to master the skill or topic (see benchmark)
framework	What you hope you don't damage in an automobile accident	An organized set of ideas used to develop lessons (see curriculum)
goals	Our ideal weight	A broad statement of what students should learn in a curriculum
graphic organizers	Something you would find on Bourbon Street in New Orleans	A way of organizing and communicating concepts in word pictures
learning cycle	What you would find on a washing machine	A specific sequence of activities that finds out what students know and refines, extends, and applies that knowledge to a variety of experiences
learning styles	What really cool people do to learn something	The way individuals acquire, order, and \process information
multiple intelligences	The kind of knowledge a schizophrenic might have	A way that individuals translate and express knowledge

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open-ended questions	What happens when absent-minded professors get distracted in the middle of asking a question	A type of question that does not have one right answer; requires students to use higher order thinking skills; and includes careful explanation of ideas
reform movement	What politicians do to encourage people to vote for them	In education, an effort to use what we know about how people learn to change the type of instruction in classrooms so that students learn more appropriate information
rubric	Something nice people don't do in public	An alternative assessment strategy that assesses the quality of student work by carefully describing what high, medium and low level products should contain
standards	What we want for everyone else	A document that describes what students are generally expected to do to demonstrate understanding of a topic or concept
thinking processes	Something that gives you a headache if you do it too often	A specific set of mental tasks that people use when making a decision, verifying information, or making a decision
whole language	The opposite of half language	A method of teaching language arts that creates reading, oral speaking and writing tasks tied to a theme, experience or literary work

Age Appropriate Teaching Techniques

Kindergarten - 5 Year Olds

"Five is the beginning of the end -- the end of the pot belly, the end of the cuddly lap hug, and the end of the unquestioned faith in adult omnipotence. To parents, five is at last the age when reason and dialog promise the long-awaited civilized behavior that is close to the adults' own. To the children, five is power and strength, to be tested and expressed with as full a measure of autonomy as they dare take."

Physical Characteristics

Becoming physically independent of adult assistance
Testing own physical capabilities… "I can do it myself"
Daring adventures, riding tricycles fast, going down the slide head first, etc.
Developing large muscle coordination, running, skipping, hopping

Social / Emotional Development

Becoming less egocentric than toddlers, beginning interest in interacting with others
Desire to play with others but may not have social or verbal skills to do so
Play or sharing with one another in cooperative efforts, possible but challenging
Fantasy and reality may be combined and /or confused
Emotions are a strong motivator for actions
Capable of sound thinking, but emotions rule over "logic"
Fantasy and feelings are key factors. Knocking over the block creation of another child may feel fun, even though "logically" it isn't kind. To a 5-year-old, animals are very anthropomorphic characters… kids can easily empathize with the bunny that is lost, the kitten that is mischievous, or the young animal that goes out into the world to test it's autonomy, only to return safely home after numerous adventures.

Intellectual / Academic Characteristics

Concrete operational stage; needs concrete examples to learn from
Just beginning to create symbolic meaning… a big part of learning to read
Learn from sensory experiences
Meaning from observable actions and responses
Able to communicate in complete sentences
Sensory awareness experiences are especially valuable, cooking, finger painting, scent jars, etc.

First and Second Grade -- 6-7 Year Olds

"The growth taking place in children at six and seven impels them toward a strong declaration of individuality and a separate psychological existence while they are still children in their parents' homes. There is only so much that 6's and 7's can remember if they don't see it in front of them."

Physical Characteristics

Learning to jump
Coordination and neurological skills improving
Fine muscle development
Kids are beginning to use fine muscles for writing and their ability to master their body has increased, thus expanding their attention span. Usually they now have their own desks to sit at and work from, but still need lots of exercise.

Social / Emotional Development

Personality traits solidifying
Still egocentric, but beginning development of conscience
Beginning sense of culture/ group identity
Right and wrong begin to be determined by internal conscience instead of external punishment or praise.
Kids may start to form tight friendships as their interactions with others increase with skill. Social groups may be determined in part by skill, th8us it is important to address different learning styles to avoid kids being labeled as "dummies." One saying goes "What you are at 7 you are at 70!"

Academic / Intellectual Skills

Interested in facts if they can see concrete examples
Beginning to order world through classifying objects by concrete principles
Able to conceive of immediate time and space
Need to do their own exploring and experimenting
Reading, handwriting, and math concepts being developed
Interest in information is there, but needs to be immediate information. Columbus coming to America many years ago is a story they may remember, yet their perception of time previous to today and space other than their town or neighborhood, may make traditional studies of history or geography irrelevant.

Tools and Techniques for K-2nd Grades

Puppets	Exercise
Imaginary trips, characters, etc	Games
Play acting	Storytelling
Brief slide shows	Appeal to feeling
Learning that involves moving	Appeal to immediate
Music/ rhythm	Skins and skulls-use with discretion (they may be
Hands-on experimenting	scaring and confusing for some kids)
Any type of sensory awareness	

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Third through Fifth Grade -- 8-11 Years Old

"Eric Erickson described this age as the "Age of Industry", i.e., of keen interest and intense involvement with material and activity. Elementary age children are avid for information and enjoy gaining skills. But they learn beset when the appeal of the content is real for their age and stage, when the skill has some observable value and when the style of learning is the childhood style of action."

Physical Characteristics

Major physical changes during these years
Between tantrums of earlier years and the dramatic changes of adolescence...a fairly steady time.

Social / Emotional Development

Moving towards increased independence from adult authority, while needing security of family structure
Developing own preferences, likes and dislikes that may not be shared by parents
Clubs and alignments with group of peers becomes important
Boy/girl differences become issues
Develop own code of operating and strong sense of fairness
Developing their own sense of selfhood and independence, kids this age may appear rude and antagonistic. It is also the age at which they begin noticing and aligning with male/ female roles… through these years contempt turns to curiosity… and even interest!

Academic/ Intellectual Development

Beginning to use more abstract thinking skills
Able to deal with several variables simultaneously in some academic areas
Able to extend knowledge of time, space, and number are deeper, however, variables should be extended only one at a time
May relate particular to the universal and may make connections and develop association between specific situations and general principles
Content needs to be presented in terms that hold value for child
Most important to keep alive interest in the process of learning
In mathematics, doing multiplication and enjoy finding more complex patterns
Geography = relationships between people and the earth
History = for history to become alive, children must feel that they are living the past
Learn about heroes, because own aspirations are similar to explorers, pioneers, etc… and need to emphasize with how people in the past felt
Working at putting feelings and thought into written and verbal format.

Middle School -- 12-14 Years Old

"Sometimes called the 'age of raging hormones' as kids this age work through, emotionally, the changes occurring in their bodies. Interest in each other is heightened and sentiments of peers especially important. Beginning to be able to argue different sides of the same issue… can hold two contradictory thoughts at the same time. Developing own opinions with less influence from parents. Teaching activities that involve social interactions and/or some degree of competition may be especially successful. Physical activities that involve visible accomplishments may be especially successful."

(Notes and quotes taken from "The Learning Child" by Dorothy Cohen and L. Marr)

What is a Middle Level Student?

There are (5) aspects to the child between the ages of 10-14 that one needs to look at when trying to understand adolescents.

Physical Characteristics: Students run the gamut of size and shape. Often their bodies look like that of an adult but inside they are still a young person. Don't let size fool you. Often the smallest kids are some of the ones who act the most mature. Growth is often rapid and this causes them to feel uncoordinated, hyperactive and easily fatigued. Often when they say they are tired, they really are.

Emotional/ Psychological Development: Trying to find themselves is the rule for middle school students. They are as confused about who they are, as we are of them. One minute they want to do adult-like things and 5 minutes later they are playing with dolls or trucks. Their attention span is very short, often they appear to be daydreaming or off in space. They are easily embarrassed and their self-concept is easily destroyed. The middle level student is willing to learn what he/she considers useful. They want to have their needs met and their problems solved immediately.

They are often over-enthusiastic and then inconsistent with follow-through in responsibilities. They display erratic and inconsistent behavior from giggling, loud laughing to anger and pouting all within a few minutes. Often what starts out as simple horseplay can climax into a full fledged fight because someone went too far or hit too hard.

Social Development: The social creature of the middle level student is the most consistent. Young people are very sensitive to peer influence and want to be part of a group. Very seldom do they become loners. They like to be with friends and the peer pressure of the group can often lead into behavior problems. They are often noisy and restless. Being corrected in front of the group can have worse affects than the behavior going uncorrected. Students will act out or "cop an attitude" toward any adult that they feel is challenging their group position. The best way to handle a disruptive student is to take that student aside and speak privately to them.

As the student becomes more secure in themselves they venture out to the opposite sex. Boy-girl relationships become established and lead to additional problems.

Talking is the key form of communication and socialization in the life of a middle level student. Try to make good use of this skill. Don't expect them to remain silent; it is impossible. Ask lots of questions and give them time to talk with each other and to the group.

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Intellectual Development: The ability to go from concrete to abstract develops during adolescent/middle level years. Problem solving skills are often at the infancy stage and need encouragement and guidance. Often a student will act like he/she understands a concept and you realize that he/she is totally confused about what you just said. The best way to find out is to have a student repeat what they understand. This clears the way for group assistance and understanding.

Spiritually: This area of middle level students' life is often nurtured through the home/ church family and is not displayed in a school like setting.

The main consideration of middle level students is the diversity amongst them. Don't assume that they are all alike. They are as different as the varieties of ice cream.

Activities must be relevant to the wide range of abilities, attention spans, and physical needs. Do not try to have them sit for long periods of time. Some may fall asleep and others may bounce off the walls. Get the students involved as much as possible. Students are usually very curious and inventive. They need lots of hands-on activities and projects. Realize that not all of us learn in the same manner. Be flexible and offer different approaches to
activities and learning.

When talking to young adolescents, often, if you let them direct the questioning, you will find that they like to think that they know about everything. Work with them, not against them. They hate being treated like elementary children even though that is often the way they act. Using words like "young men and women" offers them a challenge.

The following statements are useful when confronted with behavior that makes you angry: Think carefully about the words you use especially to middle level students. They love to get in a verbal confrontation and they will always win.

BLOOM'S LEVELS OF QUESTIONING

KNOWLEDGE   Does the student remember what he/she has seen or read?

COMPREHENSION   Can the student organize what he knows?

APPLICATION   Can the student apply techniques and rules to solve problems that have single correct answers?

ANALYSIS   Can the student identify motives and causes, make inferences, and find examples to support generalizations?

SYNTHESIS   Can the student make predictions, solve problems, or produce original communications, such as plays, stories and posters?

EVALUATION   Can the student give opinions about issues, judge the validity of ideas, judge the merit of problem-solutions, or judge the quality of art and other products?

AWARENESS TO ACTION MODEL

Sequence	Voiced	Mind Set
Awareness	"Gee, I didn't know…"	Open
Interest	"I am/am not interested"	Open/ Internalized
Attitude	"I feel like…"	Internal Testing
Opinion	"I think…"	Selected External Testing
Belief/Action	"I know/ I will/ I am…"	Externalized

CONSTRUCTIVIST LEARNING MODEL
and LEARNING STRATEGIES

I. Invitation (Surface Preconceptions, Awareness)
   A. Teachers ask for "educated guesses" to questions
   B. Teachers encourage student questions and curiosity by asking open-ended questions (make it OK for kids to not know something, so they can learn)
   C. Teachers connect concepts to meaningful contexts, problems and issues (relate to lives, cultures, careers, experiences
   D. Teachers acknowledge differences in students' perceptions (flexibility in lesson planning, regulate tone of student response to other students' comments)

II. Exploration (Gather Information, Knowledge)
   A. Students conduct interviews, literature search (intergenerational, local)
   B. Students design activities or experiments (encourage divergent thought)
   C. Students identify necessary materials and equipment (kids figure out what is needed to how to do it, create own data sheets and compare with teacher sheets)
   D. Students identify necessary materials and equ8ipment (kids figure out what is needed and how to do it, create own data sheets and compare with teacher sheets)
   E. Teacher encourages sharing of group tasks
   F. Students collect and record observations
   G. Students engage in problem-solving (ask what they initially thought, and if and how this has changed after the activity)
   H. Students interpret data and display results (encouraged to look for cause and effect, etc.)

III. Proposed Explanation and Solution (Challenge)
   A. Students construct new explanations
   B. Teachers must allow adequate time for cognitive dissonance (new paradigm or skill may be physically scary or upsetting-important to struggle with previous ideas being changed)
   C. Students conduct a peer review of proposed explanations (old ideas must be modified; acknowledge where they are, but challenge to change based on new knowledge
   D. Students engage in rigorous debates
   E. Students compare and contrast explanations and solutions with currently accepted knowledge

IV. Taking Action (Application)
   A. Students share their new conceptual understanding with others and make informed decisions
   B. Students apply their new understanding and skills to new tasks
   C. Students design and develop experiments to further expand their explanations/ solutions
   D. Students utilize higher-order thinking processes to infer new relationships and create new theories and hypotheses

From "National Center for Improving Science Education", Yager, R., *The Science Teacher*, September 1991.

CONSTRUCTIVISM

Central to the curriculum activities is an emphasis on constructivist learning theory and whole language teaching strategies.
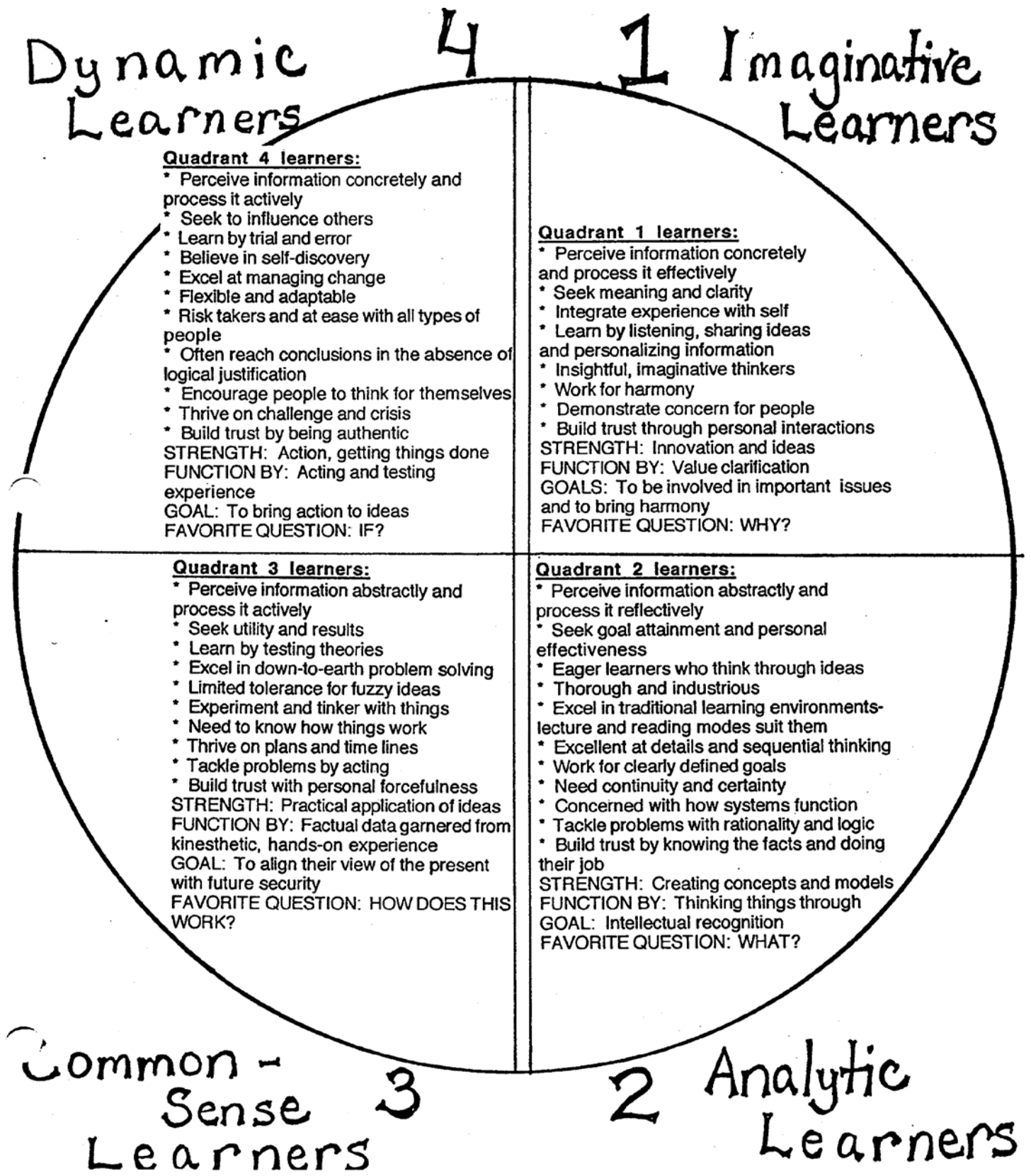
Constructivism is a theory of learning that says each learner actively constructs his/her own reality of knowing, based on the principle that students construct new understandings by combining previous understandings with new discoveries.

Constructivism, also known as constructivist learning, is based on the premise that each person brings past experiences and beliefs, as well as own cultural histories and worldviews, into the process of learning. All of these influence how each person interacts with and interprets encounters with new ideas and events. It is the learning philosophy that has been guiding the revision of today's education. Its teaching-learning strategies are aligned with how educational researchers now believe students learn best.

The constructivism perspective is a powerful framework for understanding how individuals organize experiences and what they believe to be reality. In contrast to more "traditional" classroom instruction that emphasizes that students learn because teachers teach, the responsibility for learning lies with the student. Educators are responsible for facilitating learning experiences which enable students to manipulate materials, consider points of view, participate in group work, and focus on learning concepts.

Using this technique, teachers using Project WET, WILD, PLT or FLP can guide their students toward new discovery and scientific understanding while helping them develop critical thinking and creative problem solving skills.

Project WET, WILD, PLT, and FLP activities are designed using a constructivist approach. For example, step one in the activity is designed to create student awareness and find out what students already know about the topic. It serves as the "hook" to develop their interest. Step two develops their knowledge and skills. Step three challenges their preconceived notions about the topic, helps them come to consensus, or builds new knowledge. Finally, step four encourages them and provides ideas on how they can take positive action regarding the new information and knowledge they have gained on this topic. The final step may also show how they can apply this new learning to other situations.

Dynamic Learners — 4 | 1 — Imaginative Learners

Quadrant 4 learners:
* Perceive information concretely and process it actively
* Seek to influence others
* Learn by trial and error
* Believe in self-discovery
* Excel at managing change
* Flexible and adaptable
* Risk takers and at ease with all types of people
* Often reach conclusions in the absence of logical justification
* Encourage people to think for themselves
* Thrive on challenge and crisis
* Build trust by being authentic
STRENGTH: Action, getting things done
FUNCTION BY: Acting and testing experience
GOAL: To bring action to ideas
FAVORITE QUESTION: IF?

Quadrant 1 learners:
* Perceive information concretely and process it effectively
* Seek meaning and clarity
* Integrate experience with self
* Learn by listening, sharing ideas and personalizing information
* Insightful, imaginative thinkers
* Work for harmony
* Demonstrate concern for people
* Build trust through personal interactions
STRENGTH: Innovation and ideas
FUNCTION BY: Value clarification
GOALS: To be involved in important issues and to bring harmony
FAVORITE QUESTION: WHY?

Quadrant 3 learners:
* Perceive information abstractly and process it actively
* Seek utility and results
* Learn by testing theories
* Excel in down-to-earth problem solving
* Limited tolerance for fuzzy ideas
* Experiment and tinker with things
* Need to know how things work
* Thrive on plans and time lines
* Tackle problems by acting
* Build trust with personal forcefulness
STRENGTH: Practical application of ideas
FUNCTION BY: Factual data garnered from kinesthetic, hands-on experience
GOAL: To align their view of the present with future security
FAVORITE QUESTION: HOW DOES THIS WORK?

Quadrant 2 learners:
* Perceive information abstractly and process it reflectively
* Seek goal attainment and personal effectiveness
* Eager learners who think through ideas
* Thorough and industrious
* Excel in traditional learning environments- lecture and reading modes suit them
* Excellent at details and sequential thinking
* Work for clearly defined goals
* Need continuity and certainty
* Concerned with how systems function
* Tackle problems with rationality and logic
* Build trust by knowing the facts and doing their job
STRENGTH: Creating concepts and models
FUNCTION BY: Thinking things through
GOAL: Intellectual recognition
FAVORITE QUESTION: WHAT?

Common - Sense Learners — 3 | 2 — Analytic Learners

INFUSING ENVIRONMENTAL EDUCATION INTO THE CURRICULUM

Supplement to Project WILD Workshops
Martha C. Monroe, University of Wisconsin-Stevens Point

The critical importance of environmental education -- of helping young people develop the knowledge, skills, attitudes, motivation, and commitment 'to help resolve environmental issues -- has been of special concern to Wisconsin educators. The new teacher certification requirement, the inclusion of environmental education in the 1988 curriculum mandates, and the publication of the DPI *Guide to Curriculum Planning in Environmental Education* signal a deep commitment on multiple levels of state government to protect our environment through public education.

Just how environmental education should be implemented, however, is debated around the world. Adding anything more to an already overburdened curriculum is out of the question. Expecting every teacher to become an expert on environmental issues is unrealistic. Using the environment to illustrate and teach the existing curriculum objectives through examples, field trips, or current events is possible. This is infusion.

As with other disciplines in education, two broad components require attention when infusing environmental education into the curriculum. The most obvious is content. A chemistry teacher can introduce the toxic effects of the element mercury, explain how it can be taken up by plants and animals, and describe its effects on fish in Wisconsin, dancing cats in Japan, or mad hatters in Europe. An elementary teacher could use an outdoor area as a source of words for the vocabulary list and encourage children to write poetry from outdoor inspirations. A unit on Africa can be more exciting with a day spent on African animals and the food web that ties them together in the environment. The effect of population which grows larger than the environment's carrying capacity could interest a biology class in exploring lemmings, mules in the Grand Canyon, deer in Wisconsin, or the human population. When learning public speaking skills, students might choose to research and deliver a speech on local environmental issue -- development, solid waste, groundwater pollution, etc. A lesson on government, legislation, and citizen efforts could highlight the endangered species act of local wildlife management regulations. The possibilities are as varied as your imagination, because the environment crosses discipline boundaries and is an appropriate forum for social studies, language arts, fine arts, health, and science classes.

Knowledge alone does not an environmentally literate person make. The process component of education is equally important: it includes opportunities for forming attitudes, developing skills, and encouraging participation in resolving issues. The process of identifying an issue of concern, of brainstorming alternative solutions, of researching and choosing the most appropriate solution, and of implementing a plan to make their idea a reality is environmental education -- whether the subject is lunchroom noise, bicycle rack availability, seating arrangement, or library hours. Becoming aware of how environmental issues are resolved, of the people who make a difference, and of some solutions helps student believe that these critical issues are not hopeless, and they are not helpless.   Exploring various value perspectives in the classroom and the community will help students understand that issues are controversial because of different, not right or wrong ways of looking at information.

The dimension of environmental education (attitudes, values, and skills) separates it from environmental science. Most current texts in science or social studies include units on environmental issues; it is expected that teachers will teach concepts about groundwater in earth science, food chains in elementary science, and diverse opinions on current issues such as nuclear power in social studies. An environmental educator would help students understand the controversial issues, attitudes, and skills associated with these topics.

For example, rather than teaching food chains as a fact of life, an environmental educator might help students understand the consequences of a toxic link in the chain, the avenues for solutions, and the conflicting values that are involved. The process of biomagnification concentrated DDT and other deadly pesticides in the aquatic food chain, affecting the reproductive system of predator species like the bald eagle, cormorant, brown pelican, and osprey. Whose fault? Whose responsibility? Who pays? Everyone. The joint efforts of wildlife researchers, wildlife managers, legislators, chemical manufacturers, toxic chemical regulators, and citizens were needed to ban the worst offending chemicals and preserve critical habitat from other affronts in order to increase the bird populations.

An environmental educator also helps students practice the communication, decision making, and citizenship skills that might be involved in the resolution of these issues. They would encourage discussions about the lifestyle changes that every citizen should consider in order to protect our environment.

In short, there are four kinds of activities which help convert environmental facts to environmental education. Different subject areas and different grade levels will utilize these methods more effectively than others:

1. Extend the facts to include the issues, the often controversial edge between people and the environment, and examples of solutions to these issues.

2. Practice problem solving skills with students: communications, group skills, leadership creative thinking, and decision making are a few.

3. Explore appropriate environmental feelings, attitudes, and values. Students can gain an appreciation and sense of responsibility for others and the environment, and ultimately compare their values to their lifestyles and actions.

4. Involve students in the resolutions of real issues.

NSTA Position Statement

Environmental Education

Introduction
NSTA strongly supports environmental education as a way to instill environmental literacy in our nation's pre-K-16 students. It should be a part of the school curriculum because student knowledge of environmental concepts establishes a foundation for their future understandings and actions as citizens. Central to environmental literacy is the ability of students to master critical-thinking skills that will prepare them to evaluate issues and make informed decisions regarding stewardship of the planet. The environment also offers a relevant context for the learning and integration of core content knowledge, making it an essential component of a comprehensive science education program.

Declarations

- Environmental education programs should foster observation, investigation, experimentation, and innovation. Programs should be developed with grade-appropriate materials and should use a range of hands-on, minds-on instructional strategies that encourage active learning.

- Environmental education programs and curricula should address student outcomes as specified in the National Science Education Standards, be grounded in sound research, and reflect the most current information and understandings in the field.

- All learners are expected to achieve environmental literacy and an appreciation for and knowledge of a range of environmental issues, perspectives, and positions.

- All learners should be taught how to think through an issue using critical-thinking skills, while avoiding instructor or media bias regarding what to think about the issue.

- Environmental education should provide interdisciplinary, multicultural, and multi-perspective viewpoints to promote awareness and understanding of global environmental issues, potential solutions, and ways to prevent emerging environmental crises.

- Developers of environmental education programs should strive to present a balance of environmental, economic, and social perspectives.

- Appropriate technologies should be used to enhance environmental education learning experiences and investigations.

- Environmental education programs and activities should be fostered through both formal and informal learning experiences.

- Collaborations among schools, museums, zoos, aquaria, nature centers, government agencies, associations, foundations, and private industry should be encouraged to broaden the availability of educational resources, engage the community, provide diverse points of view about the management of natural resources, and offer a variety of learning experiences and career education opportunities.

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National Science Teachers Association

Scientific Inquiry

Introduction
The *National Science Education Standards* (NSES p. 23) defines scientific inquiry as "the diverse ways in which scientists study the natural world and propose explanations based on the evidence derived from their work. Scientific inquiry also refers to the activities through which students develop knowledge and understanding of scientific ideas, as well as an understanding of how scientists study the natural world." The Science as Inquiry Standard in NSES includes the abilities necessary to do scientific inquiry and understanding about scientific inquiry.

Scientific inquiry reflects how scientists come to understand the natural world, and it is at the heart of how students learn. From a very early age, children interact with their environment, ask questions, and seek ways to answer those questions. Understanding science content is significantly enhanced when ideas are anchored to inquiry experiences.

Scientific inquiry is a powerful way of understanding science content. Students learn how to ask questions and use evidence to answer them. In the process of learning the strategies of scientific inquiry, students learn to conduct an investigation and collect evidence from a variety of sources, develop an explanation from the data, and communicate and defend their conclusions.

The National Science Teachers Association (NSTA) recommends that all K-16 teachers embrace scientific inquiry and is committed to helping educators make it the centerpiece of the science classroom. The use of scientific inquiry will help ensure that students develop a deep understanding of science and scientific inquiry.

Declarations
Regarding the use of scientific inquiry as a teaching approach, NSTA recommends that science teachers

- Plan an inquiry-based science program for their students by developing both short- and long-term goals that incorporate appropriate content knowledge.

- Implement approaches to teaching science that cause students to question and explore and to use those experiences to raise and answer questions about the natural world. The learning cycle approach is one of many effective strategies for bringing explorations and questioning into the classroom.

- Guide and facilitate learning using inquiry by selecting teaching strategies that nurture and assess student's developing understandings and abilities.

- Design and manage learning environments that provide students with the time, space, and resources needed for learning science through inquiry.

- Receive adequate administrative support for the pursuit of science as inquiry in the classroom. Support can take the form of professional development on how to teach scientific inquiry, content, and the nature of science; the allocation of time to do scientific inquiry effectively; and the availability of necessary materials and equipment.

- Experience science as inquiry as a part of their teacher preparation program. Preparation should include learning how to develop questioning strategies, writing lesson plans that promote abilities and understanding of scientific inquiry, and analyzing instructional materials to determine whether they promote scientific inquiry.

Regarding students' abilities to do scientific inquiry, NSTA recommends that teachers help students

- Learn how to identify and ask appropriate questions that can be answered through scientific investigations.

- Design and conduct investigations to collect the evidence needed to answer a variety of questions.

- Use appropriate equipment and tools to interpret and analyze data.
- Learn how to draw conclusions and think critically and logically to create explanations based on their evidence.
- Communicate and defend their results to their peers and others.

Regarding students' understanding about scientific inquiry, NSTA recommends that teachers help students understand

- That science involves asking questions about the world and then developing scientific investigations to answer their questions.
- That there is no fixed sequence of steps that all scientific investigations follow. Different kinds of questions suggest different kinds of scientific investigations.
- That scientific inquiry is central to the learning of science and reflects how science is done.
- The importance of gathering empirical data using appropriate tools and instruments.
- That the evidence they collect can change their perceptions about the world and increase their scientific knowledge.
- The importance of being skeptical when they assess their own work and the work of others.
- That the scientific community, in the end, seeks explanations that are empirically based and logically consistent.

--Adopted by the NSTA Board of Directors
October 2004

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This document can be found online at
www.nsta.org/positionstatement&psid=43

NSTA Position Statement

Informal Science Education

PREAMBLE

NSTA recognizes and encourages the development of sustained links between the informal institutions and schools. Informal science education generally refers to programs and experiences developed outside the classroom by institutions and organizations that include:

- children's and natural history museums, science-technology centers, planetariums, zoos and aquaria, botanical gardens and arboreta, parks, nature centers and environmental education centers, and scientific research laboratories

- media, involving print, film, broadcast, and electronic forms

- community-based organizations and projects, including youth organizations and community outreach services

A growing body of research documents the power of informal learning experiences to spark curiosity and engage interest in the sciences during school years and throughout a lifetime. Informal science education institutions have a long history of providing staff development for teachers, and enrichment experiences for students and the public. Informal science education accommodates different learning styles and effectively serves the complete spectrum of learners: gifted, challenged, non-traditional, and second language learners.

NSTA strongly supports and advocates informal science education because we share a common mission and vision articulated by the National Science Education Standards:

- Informal science education complements, supplements, deepens, and enhances classroom science studies. It increases the amount of time participants can be engaged in a project or topic. It can be the proving ground for curriculum materials.

- The impact of informal experiences extends to the affective, cognitive, and social realms by presenting the opportunity for mentors, professionals, and citizens to share time, friendship, effort, creativity, and expertise with youngsters and adult learners.

- Informal science education allows for different learning styles and multiple intelligences and offers supplementary alternatives to science study for non-traditional and second language learners. It offers unique opportunities through field trips, field studies, overnight experiences, and special programs.

- Informal science learning experiences offer teachers a powerful means to enhance both professional and personal development in science content knowledge and accessibility to unique resources.

- Informal science education institutions, through their exhibits and programs, provide an effective means for parents and other care providers to share moments of intellectual curiosity and time with their children.

- Informal science institutions give teachers and students direct access to scientists and other career role models in the sciences, as well as to opportunities for authentic science study.

- Informal science educators bring an emphasis on creativity and enrichment strategies to their teaching through the need to attract their noncompulsory audiences.

- NSTA advocates that local corporations, foundations, and institutions fund and support informal science education in their communities.

- Informal science education is often the only means for continuing science learning in the general public beyond the school years.

—Adopted by the
Board of Directors
July 1999

This document can be found online at
www.nsta.org/positionstatement&psid=13