

GUIDELINES FOR EXCELLENCE IN NONFORMAL ENVIRONMENTAL EDUCATION PROGRAM DEVELOPMENT AND IMPLEMENTATION NOVEMBER 2002 DRAFT

INTRODUCTION

WHAT THESE GUIDELINES ARE AND WHAT THEY ARE INTENDED TO ACCOMPLISH

Guidelines for Excellence in Nonformal Environmental Education Program Development is a set of recommendations for developing and administering high quality nonformal environmental education programs. These guidelines provide a tool that can be used to ensure a firm foundation for new programs or to trigger improvements in existing ones. The overall goal of these guidelines as with the other guidelines produced in the *Guidelines for Excellence Series* of the North American Association for Environmental Education (NAAEE) is to facilitate a superior educational process leading to the environmental quality the American people desire. The ultimate goal of environmental education is the development of an environmentally literate citizenry capable of and willing to act responsibly.

The term “environmental education program” is used in these guidelines to mean an integrated series of planned educational experiences and materials that are intended to produce a particular set of outcomes. Programs, taken together, are the methods by which organization education goals are accomplished. Programs can be small or large and can range from short-term, single occurrence events to long-term community capacity building efforts.

Nonformal environmental education programs can be extremely diverse in their settings and in their target audiences. Community-based groups, service organizations, boys and girls clubs, Elderhostel, parks, nature centers, zoos, museums, 4-H, scouting organizations, etc., all may be involved in nonformal environmental education. (See the glossary for definitions of terms such as “interpretation,” “environmental social marketing,” and “informal environmental education” that are often considered as part of or as alternative names for “nonformal environmental education.”)

HOW TO USE THESE GUIDELINES

Guidelines for Excellence in Nonformal Environmental Education Programs points out six key characteristics of high quality nonformal environmental education programs. For each of these characteristics, guidelines are then listed for nonformal programs to follow. Finally, each guideline is accompanied by several indicators listed under the heading, “What to Look For.” These indicators suggest ways of gauging whether the nonformal programs being evaluated or developed follow the guidelines. They are simply clusters of attributes you might look for to help you figure out whether the characteristic is embodied in the programs you are reviewing or developing.

The *Guidelines for Excellence in Nonformal Environmental Education Programs* can help the educator, administrator, or program developer evaluate the quality of nonformal environmental education programs. They provide direction while allowing flexibility to shape content, technique, and other aspects of program delivery. These guidelines offer a way of judging the relative merit of different programs, a standard to aim for in developing new programs, and a set of ideas about what a well-rounded nonformal environmental education program might be like. It is not reasonable to expect that all nonformal environmental education programs will follow all of the guidelines. For example, a nonformal program might not **[example to be written]**. This shortcoming does not necessarily mean that the program is fatally flawed. In cases such as this one, the *Guidelines for Excellence in Nonformal Environmental Education Programs* can point out a weakness and areas that need to be improved.

Of course, no set of guidelines could be complete, and there are bound to be important characteristics missing. The *Guidelines for Excellence in Nonformal Environmental Education* provides a foundation on which to build evaluation systems that work for different people in different situations. As a tool to inform judgment, these Guidelines for Excellence can contribute to more effective environmental education.

Sample format for the guidelines:

#1: Key Characteristic

1.1) Guideline

What to look for:

Indicator

Indicator

1.2) Guideline

What to look for:

Indicator

Indicator

Indicator

(Indicators marked with * are accompanied by examples.)

HOW ARE THE GUIDELINES BEING DEVELOPED?

In an effort to assure that these *Guidelines for Excellence* do reflect a widely shared understanding of environmental education, they are being developed by a "writing team" comprised of environmental education professionals from a variety of backgrounds and organizational affiliations. This team has taken on the challenge of turning ideas about quality into usable guidelines. In addition, drafts of these guidelines are being circulated widely to practitioners and scholars in the field (e.g., teachers, nonformal educators, zoo and museum educators, educational administrators, environmental scientists, and curriculum developers), and their comments are being incorporated into successive revisions of the document.

HOW DO THESE GUIDELINES LINK TO OTHER GUIDELINES IN THIS SERIES?

The *Guidelines for Excellence in Nonformal Environmental Education* helps nonformal educators link their practice to the guidelines in the rest of the series. As you work through the indicators in this resource, look for guidelines for:

- ?? Environmental literacy
- ?? Quality environmental education practice
- ?? Evaluating the quality of environmental education materials

The North American Association for Environmental Education (NAAEE) initiated the National Project for Excellence in Environmental Education in 1993. Resources created for the series help environmental educators answer the question, “what does it mean to be environmentally literate?” The entire series is described on the last page of this publication.

Each resource in the series has been developed to respond to specific needs identified by the environmental education community. As with this publication, every resource in the National Project for Excellence in Environmental Education series has been developed with an intensive research-based and peer-reviewed process.

WHY ENVIRONMENTAL EDUCATION?

Environmental education is rooted in the belief that humans can live compatibly with nature and act equitably toward each other. Another fundamental belief is that people can make informed decisions that consider future generations. Environmental education aims for an effective, environmentally literate citizenry who are able to participate with creativity and responsibility in a democratic society.

Environmental education often begins close to home, encouraging learners to understand and forge connections with their immediate surroundings. The awareness, knowledge, and skills needed for this localized learning provide a basis for moving out into larger systems, broader issues, and a more sophisticated comprehension of causes, connections, and consequences.

Environmental education is good education. It is learner-centered and provides the participants with opportunities to construct their own understanding through hands-on, minds-on investigations. Engaged in direct experiences, learners are challenged to use higher order thinking skills.

Environmental education provides real-world contexts and issues from which concepts and skills can be learned.

THE ROOTS OF ENVIRONMENTAL EDUCATION

The Belgrade Charter was adopted by a United Nations conference in 1976 and provides

a widely accepted goal statement for environmental education: "The goal of environmental education is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward the solutions of current problems and the prevention of new ones."

A few years later, the world's first intergovernmental conference on environmental education adopted the Tbilisi Declaration. This declaration built on the Belgrade Charter and established three broad objectives for environmental education. These objectives provide the foundation for much of what has been done in the field since 1978:

- ?? To foster clear awareness of and concern about economic, social, political, and ecological interdependence in urban and rural areas;
- ?? To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment, and skills needed to protect and improve the environment;
- ?? To create new patterns of behavior of individuals, groups, and society as a whole towards the environment.

As the field has evolved, these principles have been researched, critiqued, revisited, and expanded. They still stand as a strong foundation for an internationally shared view of the core concepts and skills that environmentally literate citizens need. Since 1978, bodies such as the Brundtland Commission (Brundtland, 1987), the United Nations Conference on Environment and Development in Rio (UNCED, 1992), and the International Conference on Environment and Society in Thessaloniki (UNESCO, 1997) have influenced the work of many environmental educators. By highlighting the importance of viewing the environment within the context of human influences, this perspective has expanded the emphasis of environmental education by focusing more attention on social equity, economics, culture, and political structure.

EXAMPLES

[We need some good examples of EE programs that will help to illustrate the various key characteristics]

KEY CHARACTERISTICS, GUIDELINES, AND INDICATORS

#1 Organizational Needs and Capacities. Effective Environmental Education Programs are supportive of their parent organization's mission, purpose, and goals.

1.1 Congruent with Organizational Priorities. The Environmental Education Program is consistent with the priorities and objectives of the parent organization.

- ?? The program is consistent with the sponsoring organization's mission, vision, and any applicable mandates.

- ?? The program supports and enhances the organization's goals related to the development of an environmentally literate citizenry.
- ?? The program is consistent with the strategic plan of the organization.
- ?? The program supports organizational communication, information, and media strategies/priorities.
- ?? The program helps achieve specific organizational objectives.
- ?? The program's budget is consistent with the organization's overall budget.
- ?? The organization's mission statement is clearly identified in program materials.

1.2 Existing Resources Inventoried and Niche for the Program Identified. The Environmental Education Program fills an identified need within existing activities of the organization and the organization has the means and will to support the program.

- ?? Programs sponsored by the organization have been inventoried and the need for and function of the program considered in light of existing activities.
- ?? The role that the new program plays in the overall offerings of the organization has been identified and the contribution that the program makes to a synergistic, comprehensive environmental education effort for the organization is detailed.
- ?? The capacities and resources of the organization (human, financial, physical site, material resources, and supplies) have been inventoried and are sufficient to support the program.
- ?? Adequate consideration has been given to program resource needs over the long term.
- ?? Organizational or agency leadership, including other departments and the Board of Directors, if applicable, support the program.
- ?? Staff and volunteers to be involved in implementing the program support its development and implementation.

#2 Needs Assessment. Effective Environmental Education Programs are designed to fill specific needs and produce tangible benefits commensurate with their costs.

2.1 Environmental Condition or Issue. The Environmental Education Program responds to carefully considered needs and issues.

- ?? The need for the program has been established and confirmed.
- ?? Specific environmental conditions or issues that need to be addressed by the program have been identified.
- ?? Audience interests or potential role in the environmental issue have been assessed.

2.2 Inventory of Existing Programs and Materials. The Environmental Education Program builds on existing resources and is not duplicative.

- ?? An analysis has been conducted to confirm that the program does not duplicate existing efforts. A survey of the literature, inventory of programs of existing environmental education partners, etc. has been conducted.

- ?? Existing materials and programs both within the organization and outside of it have been inventoried to see if present resources can be adapted or adopted to fill the need.
- ?? Community strengths and resources have been identified as they pertain to the program.
- ?? An attempt has been made to see how the new program can be an integral part of an effort to provide a comprehensive environmental education program for the community.

2.3 Audience Needs. The Environmental Education Program carefully analyzes and considers the target audience.

- ?? Stakeholders and other key people have been identified and involved in the program identification process.
- ?? The interrelationship of audience needs and provider needs have been considered.
- ?? The target audience (the precise segments of population or community you will work with) has been identified and the interests and needs of the different segments have been considered.
- ?? An assessment of target audience understandings and skills has been conducted.
- ?? Appropriate educational methodologies are identified for the age, experience, and education background of the target audience.
- ?? The kind and duration of program that is most appropriate to reach and meet the needs of the audience has been identified.
- ?? The program reaches out to and considers the needs and priorities of under-served audiences.
- ?? Facilities and activities used are broadly accessible.

Example of Audience Analysis? Overall use of a needs assessment?

#3 Program Scope and Structure. Effective Environmental Education Programs should function within a well-defined scope and structure.

3.1 Goals and Objectives for the Program. The Environmental Education Program is based on clearly delineated, relevant goals and objectives related to the ultimate goal of environmental literacy.

- ?? Program goals and objectives describe accurately and specifically what the program is designed to accomplish.
- ?? Partners develop program goals and objectives collaboratively.
- ?? Program materials clearly explain the program's importance.
- ?? Environmental issues, topics to be included, major concepts, and key questions to be considered by the program are clearly articulated in the goals and objectives.
- ?? Program goals and objectives relate specifically to the needs and interests of the identified audience(s)
- ?? Program goals and objectives address any standards or mandates of the organization and, for school-focused youth programs, are consistent with applicable state and local educational goals and objectives.

- ?? Program goals and objectives are consistent with the purposes for which the program was funded and responsive to the funder’s interests.
- ?? Evaluation criteria and indicators of success are specified for the program.

Side bar on goals and objectives? ...examples?...

3.2 Fit with Goals and Objectives of Environmental Education. The Environmental Education Program builds towards the larger goals and objectives of the environmental education field.

- ?? The program clearly establishes how it contributes to the larger goals of environmental literacy and responsible action as detailed in *Excellence in Environmental Education—Guidelines for Learning (K-12)*, published by the North American Association for Environmental Education. (See sidebar.)

SIDEBAR ON THE K-12 GUIDELINES

3.3 Structure and Delivery. The environmental education program is built on a careful evaluation of the structure and delivery system that will be the most effective for reaching the target audience

- ?? The program includes evaluation and feedback strategies and tools.
- ?? The “medium” (e.g. workshop, field day, course, guest speaker) is appropriate to meet the goals and objectives.
- ?? The program’s scope and duration is appropriate to meet the goals and objectives set for it.
- ?? The program clearly shows that thought has been given to the structure needed to accomplish objectives. For instance, is it a stand-alone event or activity? Is it infused throughout other programs or curricula? Is it a module or unit inserted into an existing program or part of a regular community group activity, etc?
- ?? Structure and delivery mechanisms meet the needs of the intended audience.

3.4 Partnerships and Collaboration. The Environmental Education Program maximizes effectiveness and efficiency by working in partnership with groups of similar interest.

- ?? Potential partners and collaborators have been identified.
- ?? Partners have been involved in the process of developing the program as appropriate.
- ?? Roles of partners and collaborators are clearly established.
- ?? The relationships among program goals and the goals of partners’ programs and collaborator’s interests are clear.
- ?? Program development team represents partner and collaborator interests.

#4 Program Development and Educator Readiness. Effective Environmental Education Programs require careful planning and well-trained staff.

4.1 Assessment of Resource Needs. The Environmental Education Program is well

planned.

- ?? Resources needed to develop and implement the program have been clearly identified.
- ?? Needed resources, both from within the organization and from its partners or clients, have been agreed to, and are available.

4.2 Quality Instructional Staff. The Environmental Education Program is based on a highly qualified and trained cadre of staff and volunteers.

- ?? The competencies of your program instructors have been assessed and the instructors have been determined to meet applicable competencies outlined in NAAEE's *Guidelines for the Initial Preparation of Environmental Educators*. (See sidebar.)

SIDEBAR ON THE INITIAL PREP GUIDELINES

- ?? The training needs of staff, volunteers, and other presenters or educators have been assessed.
- ?? A training program for staff, volunteers, and other presenters or educators has been designed and implemented, if training is needed.

#5 Program Quality and Appropriateness. Effective Environmental Education Programs are built on a foundation of quality instructional materials and thorough planning.

5.1 Quality Instructional Materials. The Environmental Education Program employs instructional materials of the highest quality.

- ?? Any educational materials developed or used as part of the program address the characteristics of quality environmental education materials as outlined in the NAAEE *Environmental Education Materials: Guidelines for Excellence*. (See sidebar.)

SIDEBAR ON THE MATERIALS GUIDELINES

- ?? Program elements and materials reflect appropriate learning theory and how it applies to the target audience(s).
- ?? Program elements and materials consider teaching methodologies and currently respected, research-based practices. Methods address the varied learning styles of audience members, including attention to theories of multiple intelligences.
- ?? Program elements and materials incorporate experiential learning theories, such as the “learning cycle.”
- ?? The program aids in the development of critical and creative thinking skills.
- ?? The program is age and audience appropriate.
- ?? The program is culturally sensitive and inclusive.
- ?? The program is integrated into an appropriate scope and sequence.

- ?? The overall program and specific activities are broadly accessible and are responsive to concepts and standards expressed in the Americans with Disabilities Act (ADA).
- ?? Program content is integrated with relevant curricula.
- ?? The program complies with all applicable regulations, standards, and safety guidelines.
- ?? The program uses appropriate and effective technology.
- ?? The program is safe and comfortable for the audience.
- ?? The program is integrated into a continuum of environmental education with readiness and follow up activities conducted as appropriate.

A box on the Adult learner might make some sense here. We may even want to consider a box that looks at how a particular program meets the needs of a variety of learners, but it seems like adult learning principles are a minimum.

5.2 Field Testing. Activities and strategies used in the Environmental Education Program are tested to ensure their effectiveness.

- ?? The materials and programs are field tested with samples of the target audience and revisions are made based on this testing whenever possible.
- ?? The evaluation plan is implemented, and updated as needed.
- ?? Equipment, consumables, money, and other resources needed to conduct the program are assembled and tested or reviewed before they are needed in the program.

5.3 Promotion, Marketing, and Dissemination. The Environmental Education Program has an effective promotion, marketing, and dissemination plan to ensure that it reaches its target audience and has the opportunity to achieve its goals and objectives.

- ?? The availability and content of the program are widely known in the local community.
- ?? Event schedules are coordinated with partners and collaborators to avoid conflicts.
- ?? Programs are scheduled to maximize participation of targeted audiences.
- ?? Partners and collaborators help in marketing and promotion efforts.
- ?? Programs are coordinated with other environmental education programs to maximize effect and opportunity for integration.
- ?? Members of the target audience know how they can participate in the program and where they can obtain additional information about the program.
- ?? Case studies or other forms of documentation are collected to facilitate marketing and sharing of information gained.

5.4 Sustainability. The Environmental Education Program can be sustained if long-term conduct of the program is necessary for effectiveness.

- ?? The program's goals and objectives include a focus for the entire length of the program.
- ?? A long-term funding strategy for the program has been developed including a strategy for continuing the program after original funding is exhausted.

?? Partnerships and other “ownership” possibilities are included in strategies for sustaining the program.

#6 Evaluation. Effective Environmental Education Programs define and measure results in order to improve current programs, ensure accountability, and maximize the effects of future efforts.

6.1 Determination of Evaluation Strategies. The Environmental Education Program has evaluation built in as an integral part of its development.

- ?? Evaluation techniques that are appropriate for the program and program goals have been determined.
- ?? Assessment techniques and tools are integrated into the program and considered early in the planning stage.
- ?? Measurement of program outputs and impacts are integrated into the evaluation process.
- ?? Type of program outputs and impacts (e.g., short-term, medium range, and long-term) are appropriate given program goals, objectives, and duration.
- ?? Overall evaluation design and the collection and analysis of data conform to accepted practices.
- ?? Impacts are monitored on an on-going basis as appropriate for the scope of the program.

6.2 Effective Evaluation Techniques and Criteria. The Environmental Education Program employs an effective evaluation strategy in order to promote success and effectiveness.

- ?? The program has been evaluated to determine the degree to which environmental literacy has been enhanced.
- ?? The program has been evaluated to determine if it met goals, objectives, and learning outcomes.
- ?? The program has been evaluated to determine if it addressed needs identified in the original needs assessment.
- ?? The program has been evaluated to determine the degree to which the program used resources such as funds and supplies responsibly and as planned.

6.3 Use of Evaluation Results. Reasons for evaluating the Environmental Education Program and the use of data obtained are considered as an integral part of program development.

- ?? The intended uses and dissemination methods for the information developed during the evaluation process is specified beforehand and built into the evaluation process--recommendations for revisions and improvements, cycle of evaluation and improvement, monitoring of results, etc.
- ?? Evaluation results are reviewed to determine whether the needs of the organization, partners, audience, sponsors and funders, and participants have been met.
- ?? Evaluation results are used to help determine: areas of strength and potential gaps; how work has impacted the community; what to do to function more effectively.

- ?? Evaluation results are used within the planning group to identify strengths, aspects of achievements to celebrate; to identify areas needing attention or improvement; to help clarify issues and/or build consensus; to provide direction, inform group decision making.
- ?? Evaluation results are used with external groups to promote the group within the community; to increase understanding of the organization's work; to communicate within one's own agency or organization; to use in funding requests; to build group visibility in the community; and to recruit other participants.
- ?? Feedback obtained is used to improve the program.
- ?? Measurements of the efficiency and effectiveness of staff, instructors, and volunteers are included in the evaluation.
- ?? Attempts to measure the overall impact of the program and to document numbers served is included in the evaluation.

Seems like we may need a couple of boxes here – perhaps a graphic of the logic model; something about the different types of information that can be collected in an evaluation; and a good example of how an evaluation was used to improve a program.

REFERENCES

[Appropriate references are needed. These have been compiled from a number of resources. References in this document should serve to help fill in background, theory and techniques.]

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GLOSSARY OF KEY TERMS

[All words listed are presently included in the text. Most definitions are from previous guidelines documents. Some will need to be added to depending on content of final text. Are there terms that need to be defined that are not now? Are these definitions adequate and accurate?]

Assessment: Evaluation of skills and knowledge acquired by learners during a learning experience. Assessment can take many forms, from basic testing such as true/false, multiple choice or matching tests to complex performance assessments.

Attitude: Mental state based on personal beliefs.

Belief: Acceptance of something as fact whether supported by evidence or not.

Concept: A general idea or understanding, especially one based on common or related attributes of specific instances. For example, the concept of ecological interdependence- that all living elements of an ecological system depend on the others-is based on a knowledge of interrelationships among living things in many specific systems.

Context: Elements preceding, following, and logically connected to something else, as the context of a paragraph.

Creative Thinking: Thinking which results in connections or possibilities previously unrecognized or unknown to the learner.

Critical Thinking: Analysis or consideration based on careful examination of information or evidence. Critical thinking relies on thoughtful questioning and logical thinking skills such as inductive and deductive reasoning.

Education: The imparting or creation of knowledge through any of several means including training, instruction, and facilitation.

Educational Objective: A statement of a specific measurable or observable result desired from an activity.

Environmental Interpretation: "...an educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media rather than simply to communicate factual information." (Tilden, 1957). Environmental interpretation usually occurs in parks and natural areas with non-captive audiences (visitors).

Environmental Issue: Related to, but distinguished from, an environmental problem. An environmental issue reflects the presence of differing perspectives on possible solutions to an environmental problem.

Environmental Literacy: Possessing knowledge about the environment and issues related to it; capable of, and inclined to, further self directed environmental learning

and/or action.

Environmental Social Marketing: An education approach that employs a structured analysis of the barriers to and benefits of behavior change, and then designs media and strategies to bring about those changes.

Goal: A desired result from an activity, lesson, or course of study.

Higher-Order Thinking Skills: Skills reflective of more complex thought processes, such as the synthesis of new knowledge or analysis of data vs. less complex processes such as rote recall or simple recognition.

Informal Environmental Education: Any unstructured environmental education activity outside the formal system where people learn from exhibits, mass media, and everyday living experiences. (The term is frequently used interchangeable with nonformal environmental education, especially within the science education community.)

Learning Styles: The belief that individuals favor particular methods of learning (e.g., oral vs. written, self-taught versus group mediated) and can optimize their understanding when such methods are available to them within the learning environment.

Multiple Intelligences: Theory advanced by Howard Gardner (see *Multiple Intelligences: The Theory in Practice*. New York: Basic Books. 1993) that classifies cognitive abilities according to seven broadly grouped aptitudes: linguistic intelligence, logical-mathematical intelligence, spatial intelligence, bodily-kinesthetic intelligence, musical intelligence, interpersonal intelligence, and intrapersonal intelligence. In 1998, an 8th intelligence, the naturalistic intelligence, was added.

Nonformal Environmental Education: Education about the environment that takes place at nonformal setting such as parks, zoos, nature centers, community centers, youth camps, etc., rather than in a classroom or school. Any organized educational activity about the environment that take place outside the formal education system. (The term is frequently used interchangeable with informal environmental education.)

Objective: A statement of a specific measurable or observable result desired from an activity. See Educational Objective.

Standard: A clear and specific statement of what a learner should know or should be able to achieve.