

# National Project for Excellence in Environmental Education



# Primary Sponsors:

U.S. EPA

- ❖ Office of Environmental Education

EECapacity

- ❖ EPA funded national EE training program housed in Cornell University's Civic Ecology Lab



Growing capacity among *all* environmental educators.

# Other Partners

- ❖ U.S. Fish and Wildlife Service
- ❖ U.S. Forest Service
- ❖ National Environmental Education Foundation
- ❖ State EE Associations
- ❖ Organizational partners – such as Project Learning Tree, Arbor Day Foundation, Project WILD, Keep America Beautiful, Project WET

# Promoting excellence in environmental education



# *Guidelines for Excellence* Publications



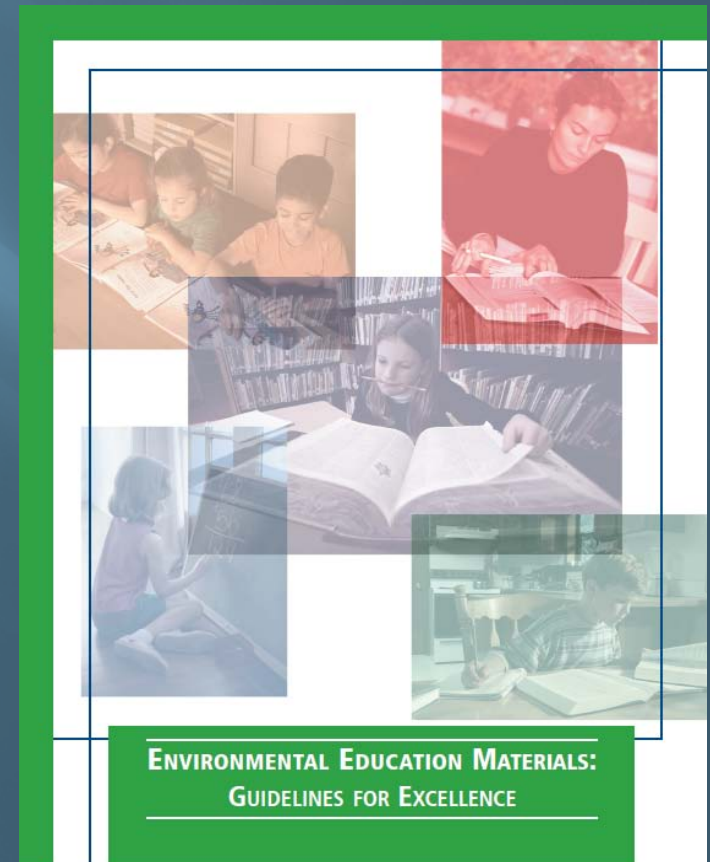
# Our Collective Wisdom

- ❖ Developed *Guidelines* through a public participatory process
- ❖ Engaging educators in a deep discussion about quality environmental education practice
- ❖ Building EE as a profession

# Essential Underpinnings of Environmental Education

- ❖ Systems
- ❖ Interdependence
- ❖ The importance of where one lives
- ❖ Integration and infusion
- ❖ Roots in the real world
- ❖ Lifelong learning

# Environmental Education Materials: Guidelines for Excellence



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## KEY CHARACTERISTIC #1 FAIRNESS AND ACCURACY



**Environmental education materials should be fair and accurate in describing environmental problems, issues, and conditions, and in reflecting the diversity of perspectives on them.**

### 1.1) Factual accuracy.

Environmental education materials should reflect sound theories and well-documented facts about subjects and issues.

*What to look for:*

- Sources of factual information are clearly referenced.
- Data are drawn from current and identified sources of information. (Knowing the source of information can aid in judging its trustworthiness or identifying possible bias.)
- Factual information is presented in language appropriate for education rather than for propagandizing.
- Information comes from primary sources, which provide context, documentation, and explanation, rather than from reviews or newspaper articles that simply provide bits and pieces of arguments or evidence.

### Example: 1.1

#### Pro and Con: Consumptive and Non-Consumptive Uses of Wildlife

*The background information for this activity, intended for use with secondary school learners, is presented in language appropriate for education, rather than for propagandizing.*

Consumptive uses are generally considered to be those in which wildlife is killed, as in hunting, fishing, and trapping. Such uses may include as a food source; for sport; for recreation; as a source of products for personal use; as a source of products for commercial use and sale; as a means to control damage to private land and crops; and as a population management tool.

Non-consumptive uses are generally considered to be those in which any wildlife is watched, studied, or recorded without being killed, such as in hiking, birdwatching, sketching, and photography. Such uses may be for purposes of recreation, education, and research. Some non-consumptive uses may actually be vicarious, such as movie, television, and gallery viewing of wildlife.

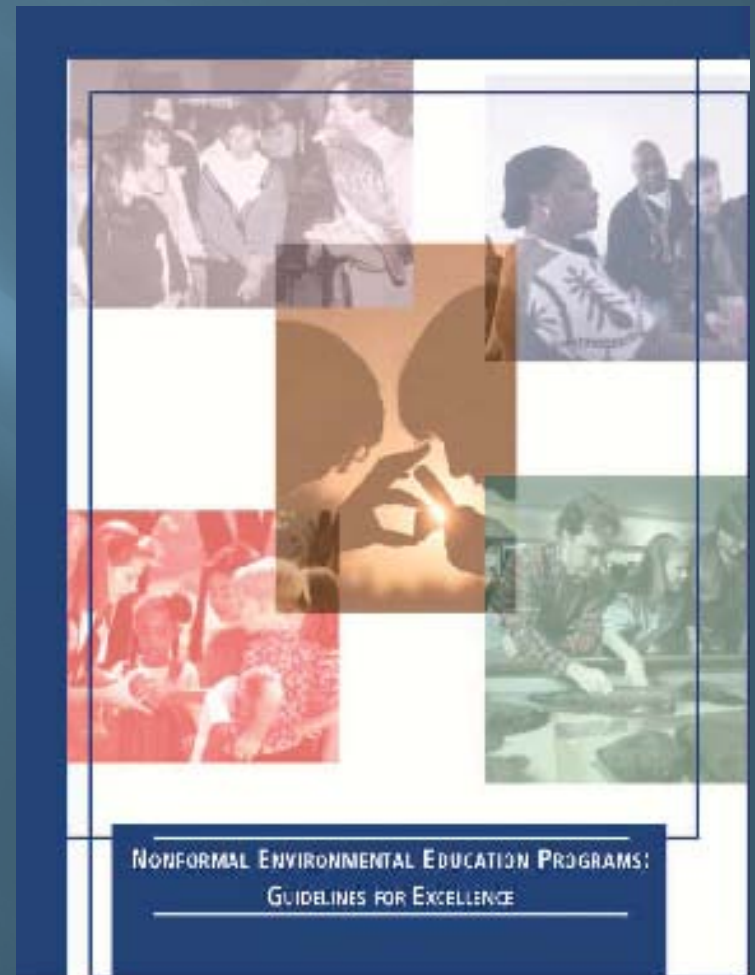
Just as consumptive uses of wildlife have impacts on individuals and populations, so can non-consumptive uses. There are times, for example, when non-consumptive uses

# Guidelines for the Preparation and Professional Development of Environmental Educators



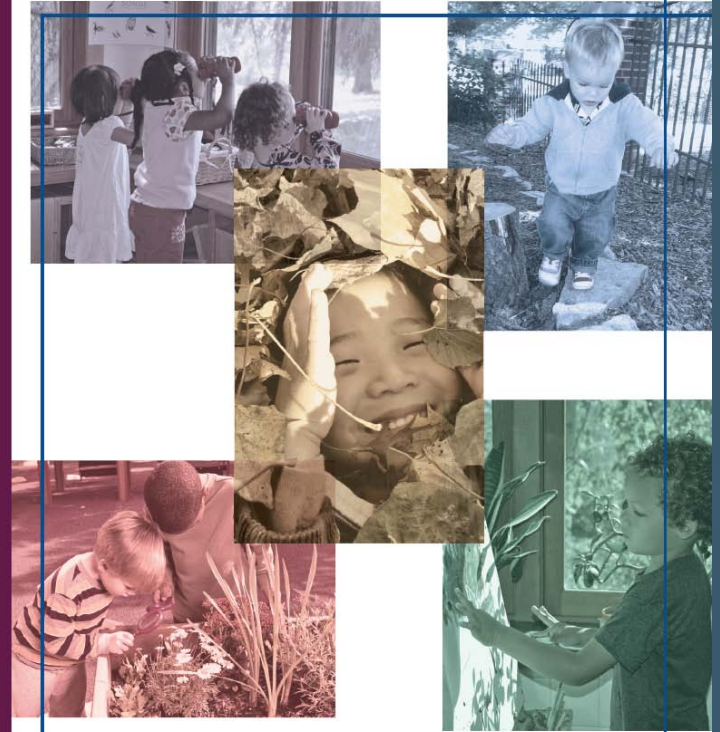
GUIDELINES FOR THE PREPARATION AND PROFESSIONAL  
DEVELOPMENT OF ENVIRONMENTAL EDUCATORS

# Nonformal Environmental Education Programs: Guidelines for Excellence



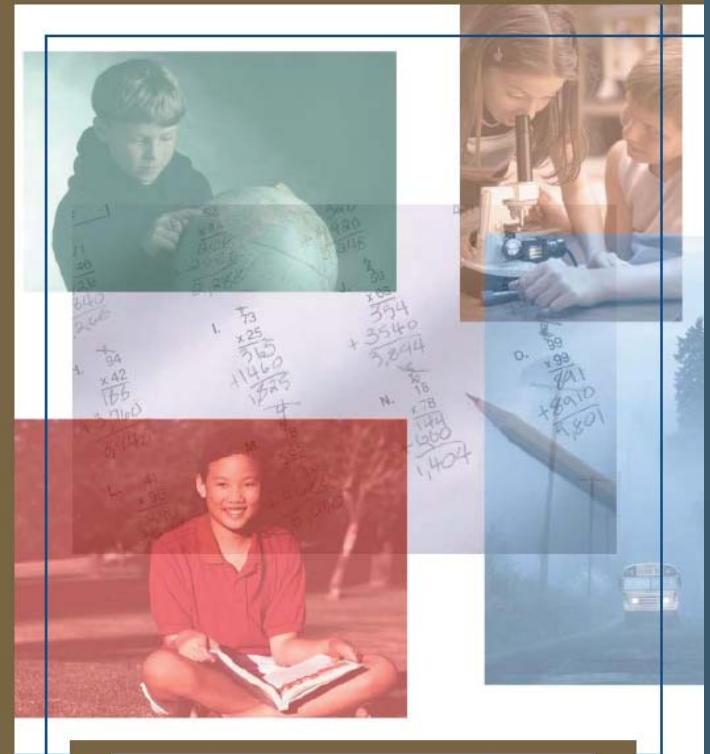
NONFORMAL ENVIRONMENTAL EDUCATION PROGRAMS:  
GUIDELINES FOR EXCELLENCE

# Early Childhood Environmental Education Programs: Guidelines for Excellence



EARLY CHILDHOOD ENVIRONMENTAL EDUCATION PROGRAMS:  
GUIDELINES FOR EXCELLENCE

# Excellence in Environmental Education: Guidelines for Learning (K-12)



EXCELLENCE IN ENVIRONMENTAL EDUCATION:  
GUIDELINES FOR LEARNING (K-12)

# Guidelines for Learning (K-12)

- ❖ A Resource That Provides:
  - A common, voluntary set of guidelines for EE
  - Expectations for achievement in 4<sup>th</sup>, 8<sup>th</sup> and 12<sup>th</sup> grades
  - A framework for EE programs and curricula
  - Demonstrations on how EE can be used to meet traditional standards
  - A definition of the aims of EE
- ❖ Developed through a broad-based review and comment process

# Guidelines for Learning (K-12)

## Four Strands

- 1) Questioning, Analysis and Interpretation Skills
- 2) Knowledge of Environmental Process and Systems
- 3) Skills for Understanding and Addressing Environmental Issues
- 4) Personal and Civic Responsibility

## **Strand 2— Knowledge of Environmental Processes and Systems**

### **Strand 2.1—The Earth as a Physical System**

#### **References to Standards:**

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Geography 118–119  
Science Benchmarks 72

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Science 127  
Science Benchmarks 76–77

#### **Guidelines:**

**A) Processes that shape the Earth**—Learners are able to identify changes and differences in the physical environment.

- Identify some of the forces that cause erosion within their own region, pointing out factors such as freezing and thawing, wind, waves, and gravity.
- Identify some distinctive landforms within their region and, using maps and images, in other areas of the world. For example, understand that the ocean is a single, interconnected body of water.
- Differentiate among climates, considering factors such as precipitation, temperature, and resident plants and animals and how they form the different biomes. Understand that the ocean is a major influence on weather and climate no matter where you live.
- Observe and record seasonal differences. For example, draw a series of pictures or compile photographs that illustrate differences such as day length, migration of specific bird species, and when specific tree species lose their leaves.

**B) Changes in matter**—Learners are able to identify basic characteristics of and changes in matter.

- Describe objects in terms of the materials they are made of and their observable properties. For example, describe buildings constructed with different materials and discuss why these materials may have been

# Strand 1: Questioning, Analysis & Interpretation Skills

- ❖ Questioning
- ❖ Designing investigations
- ❖ Collecting information
- ❖ Evaluating accuracy & reliability
- ❖ Organizing information
- ❖ Working with models & simulation
- ❖ Drawing conclusions & developing explanations

# Strand 2: Knowledge of Environmental Processes and Systems

Divided into four sub-strands:

- ❖ The Earth as a physical system
- ❖ The living environment
- ❖ Humans & their societies
- ❖ Environment & Society

# Strand 3: Skills for Understanding and Addressing Environmental Issues

Divided into two sub-strands:

- ❖ Skills for analyzing & investigating environmental issues
- ❖ Decision-making & citizenship skills

# Strand 4: Personal and Civic Responsibility

- ❖ Understanding societal values & principles
- ❖ Recognizing citizens' rights & responsibilities
- ❖ Recognizing efficacy
- ❖ Accepting personal responsibility

# Using Environmental Literacy as a Framework

- ❖ Crosswalks with the Essential Principles for Ocean Literacy, Climate Literacy, and Energy Literacy
- ❖ No Child Left Inside – State Environmental Literacy Plans
- ❖ Green Ribbon Schools Awards

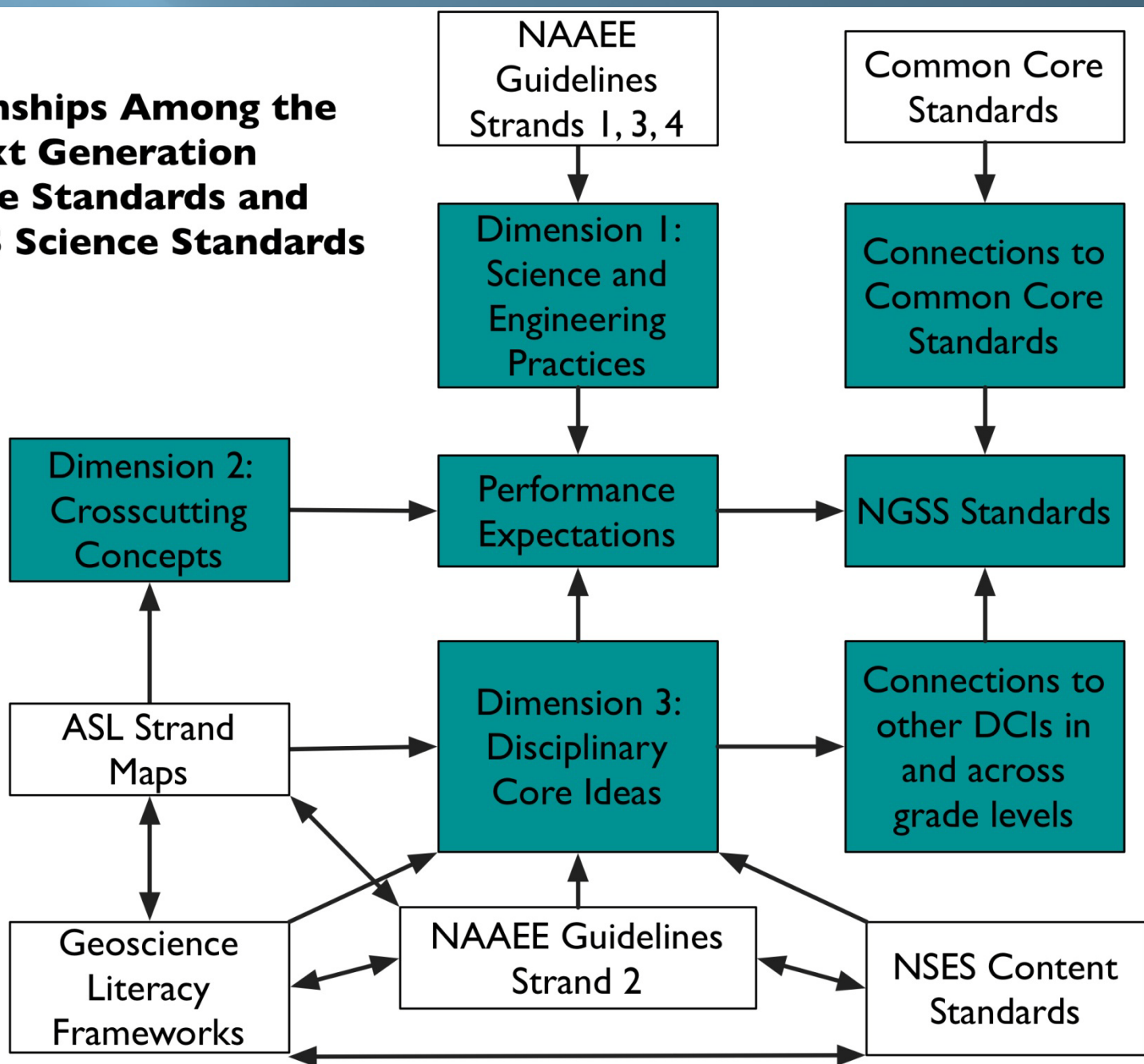
<http://eelinked.net/n/guidelines>

# Correlations between NAAEE Guidelines and Common Core Standards

- ▣ Common Core Standards for English Language Arts
- ▣ Common Core Standards for Mathematics
- ▣ Adopted by 45 states;
- ▣ Next Generation Science Standards anticipated in Winter, 2013;
- ▣ New National Social Studies Standards also on the way;

Anchor Standards for Reading (K-12)	NAAEE: Guidelines for Learning (4 <sup>th</sup> Grade)	NAAEE: Guidelines for Learning (8 <sup>th</sup> Grade)	NAAEE: Guidelines for Learning (12 <sup>th</sup> Grade)
<b>Key Ideas and Details</b>			
<ul style="list-style-type: none"> <li>1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</li> </ul>	<p>1C. Collecting information – Learners are able to locate and collect information about the environment and environmental topics.</p> <p>1G. Drawing conclusions and developing explanations – Learners can develop simple explanations that address their questions about the environment.</p>	<p>1C. Collecting information – Learners are able to locate and collect reliable information about the environment or environmental topics using a variety of methods and sources.</p> <p>1G. Drawing conclusions and developing explanations – Learners are able to synthesize their observations and findings into coherent explanations.</p>	<p>1C. Collecting information – Learners are able to locate and collect reliable information for environmental investigations of many types. They know how to use sophisticated technology to collect information, including computer programs that access, gather, store, and display data.</p> <p>1G. Drawing conclusions and developing explanations – Learners are able to use evidence and logic in developing proposed explanations that address their initial questions and hypotheses.</p>
<ul style="list-style-type: none"> <li>2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.</li> </ul>	<p>1G. Drawing conclusions and developing explanations – Learners can develop simple explanations that address their questions about the environment.</p>	<p>1G. Drawing conclusions and developing explanations – Learners are able to synthesize their observations and findings into coherent explanations.</p>	<p>1G. Drawing conclusions and developing explanations – Learners are able to use evidence and logic in developing proposed explanations that address their initial questions and hypotheses.</p>
<ul style="list-style-type: none"> <li>3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.</li> </ul>	<p>1A. Questioning – Learners are able to develop questions that help them learn about the environment and do simple investigations.</p> <p>1G. Drawing conclusions and developing explanations – Learners can develop simple explanations that address their questions about the environment.</p>	<p>1A. Questioning – Learners are able to develop, focus, and explain questions that help them learn about the environment and do environmental investigations.</p> <p>1G. Drawing conclusions and developing explanations – Learners are able to synthesize their observations and findings into coherent explanations.</p>	<p>1A. Questioning – Learners are able to develop, modify, clarify, and explain questions that guide environmental investigations of various types. They understand factors that influence the questions they pose.</p> <p>1G. Drawing conclusions and developing explanations – Learners are able to use evidence and logic in developing proposed explanations that address their initial questions and hypotheses.</p>

# Relationships Among the Next Generation Science Standards and Other US Science Standards



[eelinked.net/n/guidelines](http://eelinked.net/n/guidelines)





# Guidelines for Excellence

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## Early Childhood Environmental Education Rating Scale

Posted By [Bora Simmons](#) on 1/20/2012 3:12:58 PM | Last Edited By [Bora Simmons](#) on 2/3/2012 4:58:38 PM

### Early Childhood Environmental Education Rating Scale

The *Early Childhood Environmental Education Rating Scale* (NAAEE 2011), authored by Yash Bhagwanji, provides a collaborative tool for educators and others to discuss their early childhood environmental education program goals, consider strengths and areas of needed improvement, and chart a future direction for development. The *Early Childhood Environmental Education Rating Scale* is easy to use while also encouraging deep discussions about program philosophy, design and implementation. Building off of NAAEE's *Early Childhood Environmental Education Programs: Guidelines for Excellence*, it is a much welcomed addition to the early childhood environmental education tool kit.

The *Early Childhood Environmental Education Rating Scale* (ECEERS) is a formative evaluation tool designed to assist programs in improving their environmental education curriculum.

Whether you work with a center-based child development or family day care center, this tool can help you make needed improvements in the quality of activities, experiences, interactions, and instruction concerning the world of nature and its value in society. Environmental education centers, too, may benefit through improvements in curriculum that better respond to the abilities, interests, learning styles, and motivations for learning of young children.

Based on six key characteristics of high-quality early childhood environmental education programs (North American



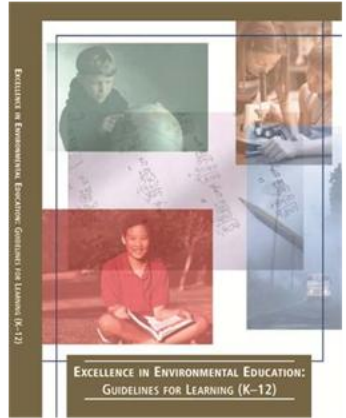
## Excellence in Environmental Education: Guidelines for Learning (K-12)

Posted By [Mary Ocwieja](#) on 10/18/2010 5:16:42 PM | Last Edited By [Bora Simmons](#) on 5/18/2011 1:04:20 PM

*Summary: Excellence in Environmental Education Guidelines for Learning (K-12) provides students, parents, educators, home schoolers, policy makers, and the public a set of common, voluntary guidelines for environmental literacy achievement. The guidelines support state and local environmental education efforts by setting learner expectations for environmental literacy in 4th, 8th, and 12th grades. Use these guidelines to support your state Environmental Literacy Plan efforts. Read or download from this post.*

**Excellence in Environmental Education Guidelines for Learning (K-12)** (revised 2010) provides students, parents, educators, home schoolers, policy makers, and the public a set of common, voluntary guidelines for environmental literacy. The guidelines support state and local environmental education efforts by:

- Setting expectations for performance and achievement in fourth, eighth, and twelfth grades;
- Suggesting a framework for effective and comprehensive environmental education programs and curricula;
- Demonstrating how environmental education can be used to meet standards set by the traditional disciplines and to give students opportunities to synthesize knowledge and experience across disciplines; and
- Defining the aims of environmental education.



**Post Media**  
K-12 Learner Guidelines  
by NPEEE  
Image



**Summary of Learner Guidelines (Two Pages)**  
by Bora Simmons  
Downloadable Document

**Learner Guidelines (Complete Publication)**  
by Bora Simmons  
Downloadable Document  
PDF of Excellence in Environmental Education: Guidelines for Learning (K-12).

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**For more information:**

Akiima Price

[akiima@apriceconsulting.com](mailto:akiima@apriceconsulting.com)

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*Gaining Perspective:  
Seeing EE Through Different Lenses*  
**NAAEE 41st Annual Conference**  
Oakland, California  
October 10 - 13, 2012