

Environmental Educator Knowledge & Skills: Guidelines for Excellence

Online Workshop

Participant's Manual



Environmental Educator Knowledge and Skills: Guidelines for Excellence **Online Module¹**

Participant's Manual

Overview

Through this module, you will be introduced to a set of competencies for educators articulated in NAAEE's ***Environmental Educator Knowledge and Skills: Guidelines for Excellence***. These competencies are designed for educators preparing to teach environmental education in a variety of job settings. As a culminating exercise, you will have the opportunity to complete a self-assessment against these competencies and create your own professional development plan.

The ***Environmental Educator Guidelines*** outline a set of recommendations about the basic knowledge and abilities educators need to provide high-quality environmental education. The guidelines are designed to apply:

- ✓ within the context of preservice teacher education programs and environmental education courses offered to students with varied backgrounds such as environmental studies, geography, liberal studies, or natural resources
- ✓ to the professional development of educators who will work in both formal and nonformal educational settings, offering early childhood to adult learning experiences
- ✓ to full-time environmental educators and those for whom environmental education will be among other responsibilities

You will have the opportunity to unpack these competencies and think about what it means to be an environmental educator.

Let's get started!

¹ This online module was originally adapted by Bora Simmons and Renee Gracon from ***Professional Development of Environmental Educators: Guidelines for Excellence – Workshop Resources*** by Bora Simmons and Elizabeth Schmitz. It has been further updated with the 2025 publication of *Environmental Educator Knowledge & Skills: Guidelines for Excellence*.

Welcome, How We Will Work Together and Other Logistics

Module Objectives

Upon completion of the online module, you will be able to:

- ✓ Describe a set of environmental educator competencies
- ✓ Assess your own level of preparation as an environmental educator
- ✓ Reflect on your own need for professional development in environmental education using the *Environmental Educator Knowledge and Skills: Guidelines for Excellence*

Module Outline

Getting Started

- Welcome, How We Will Work Together, and Other Logistics
- PowerPoint/video: North American Association for Environmental Education
- PowerPoint/video: Introducing the Environmental Educator Guidelines
- PowerPoint/video: National Project for Excellence in Environmental Education
- Activity #1: Educator Scavenger Hunt

Environmental Literacy

- Activity #2: My Environmental Literacy Portfolio
- Video: What is Environmental Literacy?

Foundations of Environmental Education

- Activity #3: History of Environmental Education Timeline
- Activity #4: Comparing environmental education and education for sustainable development

Professional Responsibilities of the Environmental Educator

- Activity #5: Do's and Don'ts

Commitment to Community, Collaboration, and Fairness

- Activity #6: Fostering a Sense of Belonging

Planning Environmental Education

- Activity #7: Analyzing Instructional Approaches

Implementing Environmental Education

- Activity #8: Educator Observation Rubric

Assessment and Evaluation

- Activity #9: Environmental Educator Self-Assessment
- Wrap-up and Final Reflections

NOTE: Underlined titles that are printed in green font are active hyperlinks.

Getting Started

It's time to jump into the ***Environmental Educator Knowledge and Skills: Guidelines for Excellence***. In this session, you will become familiar with the guidelines and how they are organized.

With your class, or asynchronously, view the video presentations, **National Project for Excellence in Environmental Education** and **Introducing the Environmental Educator Guidelines**, to:

- ✓ Provide background information about the National Project for Excellence in Environmental Education, and
- ✓ Introduce the ***Environmental Educator Knowledge and Skills: Guidelines for Excellence***

Activity #1: Educator Scavenger Hunt [20 minutes]

In this activity, you will complete a scavenger hunt as a way of becoming familiar with the ***Environmental Educator Knowledge and Skills: Guidelines for Excellence***.

Materials:

- ✓ ***Environmental Educator Knowledge and Skills: Guidelines for Excellence***
- ✓ **Educator Scavenger Hunt [Handout A.1]**

Procedure:

1. Download a copy of ***Environmental Educator Knowledge and Skills: Guidelines for Excellence*** from the NAAEE website by either clicking the underlined title or by going to: <https://eeepro.naaee.org/sites/default/files/eeepro-post-files/Environmental-Educator-Knowledge-Skills-Guidelines-Excellence-2025-AC.pdf>
2. Complete the **Educator Scavenger Hunt [Handout A.1]**.
3. Read pages 8-17 of ***Environmental Educator Knowledge and Skills: Guidelines for Excellence***.

Environmental Literacy

Review **Key Characteristic #1** (page 19 of the Environmental Educator Guidelines). Notice that **Key Characteristic #1** states “Educators understand that becoming environmentally literate is a journey that depends on developing awareness, appreciation, and knowledge of the interrelationships of the natural environment of which we are part. This literacy includes essential skills that enable individuals to make informed decisions and act on those decisions both individually and collectively.

Educators understand the importance of the relationships among ecosystem health, community well-being, and long-term sustainability.” Environmental literacy is foundational to environmental education. In **Activity #2**, you will reflect on your own environmental literacy.

Activity #2 My Environmental Literacy Portfolio [30 minutes]

Environmental literacy is developed over a lifetime. In this activity, you will reflect on your own level of environmental literacy and the many ways you developed it over the years.

Materials:

- ✓ **Key Characteristic #1 Environmental Literacy [Handout B]**
- ✓ **My Environmental Literacy Portfolio [Handout C]**
- ✓ Pencil or pen

Procedure:

1. Imagine that you are applying for a job that requires a high level of environmental literacy. As a first step in the job application process, you are asked to submit an outline **[Handout C]** of your full portfolio that would provide evidence of your accomplishments.
2. Review **Handout B**. Reflect on your environmental literacy strengths across the six guidelines.
3. For each of the six guidelines, think about all the ways you developed environmental literacy competencies over the years (e.g., formal coursework, workshops, job experiences, volunteering, community activities, personal reading, hobbies).
4. Use **Handout C** to outline the evidence you would submit in your portfolio (e.g., summer research assistant collecting and analyzing data related to local housing needs or Undergraduate ecology course).
5. Submit the completed **Handout C** to your instructor.

Foundations of Environmental Education

Every field has its own goals, theories, practices, and history. Review **Key Characteristic #2** (pages 31-35 of the Environmental Educator Guidelines). In the next activity (**Activity #3: History of Environmental Education Timeline**) you will explore a bit of the history of environmental education.

Activity #3 Environmental Education Timeline [15 minutes]

Organized efforts to educate the public on environmental concerns and solutions have a relatively short history. In this activity, you will explore some of the events and organizations that have been important to the development of environmental education as a field in the United States.

Materials:

- ✓ Packet of events/organizations assigned to you by the instructor
- ✓ Paper and pencil

Procedure:

1. On a blank sheet of paper, **draw** a timeline, starting in the year 1900 and continuing to the present. Divide the timeline into 10-year segments. Alternatively, you may use the online form given to you by your instructor.
2. Read each of the entries you have been assigned. Think about why each event/organization is important to the development of environmental education.
3. Put each of the entries into chronological order and assign them to a decade on the timeline. Be ready to explain your reasoning.
4. With others in your class, compile the entries into a single timeline.

Activity #4: Comparing Environmental Education and Education for Sustainable Development

Environmental education did not evolve in isolation. It has built from and contributed to the evolution of allied education fields. Understanding how EE is similar to and different from these fields can be instructive. In this activity, you will compare two fields, environmental education and education for sustainable development.

Activity #4 Comparing Environmental Education and Education for Sustainable Development [15 minutes]

Environmental education did not evolve in isolation. It has built from and contributed to the evolution of a number of education fields. Understanding how EE is similar to and different from these fields can be instructive. In this activity, participants will compare two fields, environmental education and education for sustainable development.

Materials:

- ✓ **Handout E:** Comparing Environmental Education and Education for Sustainable Development
- ✓ Paper and pencil

Procedure:

1. Use the chart (below) to compare environmental education and education for sustainable development.
2. Be sure to identify the characteristics that apply to both environmental education and education for sustainable development in the middle column.

Characteristics of Environmental Education	Characteristics of Both	Characteristics of Education for Sustainable Development

Professional Responsibilities of the Environmental Educator

Key Characteristic #3 focuses on environmental education as a profession and the importance of maintaining high standards for instruction and professional conduct. Review **Key Characteristic #3** (pages 37-49 of the Environmental Educator Guidelines).

With your class, consider this fundamental question: What are your professional roles and responsibilities as an environmental educator?

Activity #5: Do's and Don'ts [20 minutes]

Civics teachers often engage their students in discussions around controversial issues, such as gun rights, whether the death penalty should be abolished, or whether animal testing should be banned. In this exercise, you will create a list of “dos” and “don'ts” for civics teachers to help them navigate teaching about controversies.

Materials

- ✓ **Handout F**
- ✓ Paper and pencil/pen

Procedure

1. Read the scenario outlined in **Handout F**.
2. Imagine you are giving some guidance to civics teachers who will be teaching about a controversial issue that they care deeply about, as individuals. What would be on your “do's” and “don'ts” list for high-quality instruction?
3. Write down your list of “do's” and “don'ts”
4. With others in your class, compile a group list of “do's” and “don'ts”
5. Revisit your “do's” and “don'ts” list. With an environmental education lens:
 - What items would you add to your “do's” and “don'ts” list? Why?
 - What would you delete or change? Why?
6. Update your list.

Commitment to Community, Collaboration, and Fairness

Key Characteristic #4 (pages 51-54) argues that instruction with a focus on community, collaboration, and fairness is crucial to environmental education.

Activity #6: Foster a sense of belonging

In this activity you will explore the idea of belonging and how educators can proactively foster a sense of belonging.

Materials

- ✓ Paper and markers or Google Slide

Procedure

1. When you think about “belonging,” what are the first ideas that come to your mind. What is belonging? What does it mean if an educational environment fosters a sense of belonging? Jot down your thoughts.
2. Design a poster or display for a teacher’s lounge or education classroom (think university classroom). This poster’s goal is to help educators think about what it means to be committed to collaboration and belonging.
3. Take a photo of your poster (if you created it on paper).

Planning Environmental Education

Review **Key Characteristic #5: Planning Environmental Education** (pages 57-67 of the Environmental Educator Guidelines). Designing effective instruction involves combining the fundamentals of high-quality education with the unique features of environmental education.

Activity #7: Analyzing Instructional Approaches [30 minutes]

In this activity, you will explore widely used instructional approaches and consider how they can be adapted for different audiences, settings, and instructional technologies.

Materials

- ✓ Internet access
- ✓ **Environmental Educator Knowledge and Skills: Guidelines for Excellence**
- ✓ **Handout G**
- ✓ Paper and pen/pencil

Procedure

1. Take a moment to think about one of your favorite instructional approaches or teaching methods. What makes it so special for you?
2. Brainstorm common instructional strategies used in environmental education. Write these on a piece of paper.
3. Read **Key Characteristic #5: Planning Environmental Education** (pp. 57-67) in the *Educator Guidelines*.
4. Compare your list of instructional strategies (Step #2) to the list of Approaches to Environmental Education Instruction (Resource #8, pp.106-108). You may also want to take a look at the approaches used to enhance civic engagement (Resource #14, pp. 121-123).
5. Select one instructional strategy to explore further, either from your list or the lists in the *Educator Guidelines*.
6. Complete **Handout G**.
7. Email your completed poster to your instructor before the next class meeting.

Implementing Environmental Education

Review **Key Characteristic #6: Implementing Environmental Education** (pages 69-76 of the Environmental Educator Guidelines). Essential to effective environmental education practice is the ability to engage all learners in relevant open inquiry and investigation. **Key Characteristic #6** focuses on the ability of educators to create supportive, safe, relevant, and responsive learning environments that are welcoming to the whole learning community.

Activity #8: Educator Observation Rubric [30 minutes]

In this activity, you will develop a rubric for one of the three guidelines listed under *Key Characteristic #6: Implementing Environmental Education*.

Materials

- ✓ Copy of **Environmental Educator Knowledge and Skills: Guidelines for Excellence**
- ✓ **Educator Observation Rubric [Handout H]**
- ✓ Paper and pencil/pen

Procedure

1. Think about your favorite teacher or learning experience. What was so special about the teacher? What was so special about the learning experience?
2. Think about a learning experience where you did not feel included. What made you feel excluded or unwelcome?
3. Imagine that you are mentoring novice environmental educators. As a mentor, you will want to observe the novice educators' teaching and provide constructive feedback to them on the degree to which they are addressing the criteria established in **Key Characteristic #6: Implementing Environmental Education**
4. For your assigned guideline (e.g., guideline 6.2, 6.4, 6.6), use **Handout H** to create a rubric that could be used to gauge the novice educators' ability to apply the assigned guideline. Be sure to indicate how you will address inclusion of all learners.

Assessment and Evaluation

Review **Key Characteristic #7: Assessment and Evaluation** (pages 79-84 of the Environmental Educator Guidelines). Ongoing assessment and evaluation are integral to environmental education. Environmental educators possess the tools for assessing learner progress and evaluating the effectiveness of their own programs.

Reflection is one form of assessment. As a final, culminating activity, complete Environmental Educator Self-Assessment and create a professional development plan for your on-going learning.

Activity #9: Environmental Educator Self-Assessment and Professional Development Plan [30 minutes]

As a culminating exercise, and an example of assessment, you will be asked to reflect further on the six Key Characteristics and your own capacities as an environmental educator.

Materials

- ✓ *Environmental Educator Knowledge and Skills: Guidelines for Excellence*
- ✓ Environmental Educator Self-Assessment [Handout J]
- ✓ Paper and pencil/pen

Procedure

1. Review pages 12-13 of ***Environmental Educator Knowledge and Skills: Guidelines for Excellence***.
 2. Complete **Handout J: Environmental Educator Self-Assessment**
 3. Look back at your self-assessment. What are your strengths? What needs to be developed further?
 4. Were you surprised by the results of your self-assessment? If so, what surprised you?
 5. Label your completed **Self-Assessment** with your name and today's date.
- Post your completed **Self-Assessment** to your instructor.

Handout A.1

Activity #1: Educator Scavenger Hunt

1. ***Environmental Educator Knowledge and Skills: Guidelines for Excellence*** is part of a continuing series of documents published by ...

2. (True or False) The guidelines **ARE NOT** designed to apply to full-time environmental educators and those for whom environmental education will be among other responsibilities. _____
3. Page 11 describes **How to Use the Guidelines**. Each Key Characteristic is further described by _____ and _____.
4. The ***Educator Guidelines*** are organized into **7 Key Characteristics**, each of which describes a knowledge or skills area. Fill in the complete title of each Key Characteristic.
 - a. Key Characteristic 1:

 - b. Key Characteristic 2:

 - c. Key Characteristic 3:

 - d. Key Characteristic 4:

 - e. Key Characteristic 5:

 - f. Key Characteristic 6:

 - g. Key Characteristic 7:

5. The ***Educator Guidelines*** include three organizing categories and seven key characteristics. Fill in the complete title for each of three organizing categories.
 - a. _____
 - b. _____
 - c. _____
6. Page 14 suggests eight essential **Underpinnings of Environmental Education**. Which of these key principles do you feel is the most essential, and why?

7. Which of the following is **NOT** considered part of the **Instructional Vision of Environmental Education**? _____

- A. *EE draws on and advances broader educational goals and instructional methods*
 - B. *Instruction should engage the learner in the process of building knowledge and skills and be guided in part by the student's interests.*
 - C. *Environmental education is best taught in the K-12 classroom.*
 - D. *Environmental education provides opportunities for learners to enhance their capacity for independent thinking and effective, responsible action.*
8. **Key Characteristic #3, guideline 3.2**, the third indicator (3rd bullet point) suggests that environmental educators should be able to analyze and select materials that together present a _____, _____, _____, and _____.
9. **Key Characteristic #6: Implementing Environmental Education** states that environmental educators, through their instructional practices, create supportive, safe, relevant, and responsive learning environments that are welcoming to the whole learning community. What are some strategies you use to engage your learners in relevant open inquiry and investigation?

10. Some **Approaches to Environmental Education Instruction** are presented on pages 106-108. From the approaches listed, which would you **NOT** be able to put into action? _____
11. (True or False) Seven sets of guidelines have been published. Hard copies can be purchased from NAAEE or **downloaded for free** from the NAAEE website.

Handout B

Key Characteristic #1: Environmental Literacy

Educators understand that becoming environmentally literate is a journey that depends on developing awareness, appreciation, and knowledge of the interrelationships of the natural environment of which we are part. This literacy includes essential skills that enable individuals to make informed decisions and act on those decisions both individually and collectively. Educators understand the importance of the relationships among ecosystem health, community well-being, and long-term sustainability.

1.1 Awareness and appreciation

Educators build an appreciation that Earth is one living, dynamic community.

1.2 Earth processes and systems

Educators develop an understanding of Earth processes and systems (e.g., atmosphere, hydrosphere, geosphere, and biosphere) and how these systems interact with one another.

1.3 Human systems

Educators develop an understanding of human systems (e.g., social, economic, political, and cultural) and how individual and group action affects the long-term sustainability of Earth systems.

1.4 Application of systems thinking

Educators apply systems thinking to understand how human activities cause and mitigate environmental change and how environmental change affects long-term environmental sustainability at varying, interconnected levels (e.g., local, state/provincial, regional, tribal, national, and global).

1.5 Action strategies and skills

Educators apply skills for analyzing and investigating environmental concerns

1.6 Personal and civic responsibility

Educators build an understanding that everyone, individually and collectively, can make a difference and contribute to environmental solutions.

Handout C

Activity #2 My Environmental Literacy Portfolio

Environmental literacy is developed over a lifetime. In this activity, you will reflect on your own level of environmental literacy and the many ways you developed it over the years.

Procedure:

1. Imagine that you are applying for a job that requires a high level of environmental literacy. As a first step in the job application process, you are asked to submit an outline **[Handout C]** of your full portfolio that would provide evidence of your accomplishments.
2. Review **Handout B**. Reflect on your environmental literacy strengths across the six guidelines.
3. For each of the guidelines, think about all the ways you developed environmental literacy competencies over the years (e.g., formal coursework, workshops, job experiences, volunteering, community activities, personal reading, hobbies).
4. Outline the evidence you would submit in your portfolio (e.g., summer research assistant collecting and analyzing data related to local housing needs or Undergraduate ecology course). For each guideline, list up to four examples of evidence.
5. Submit the completed **Handout C** to your instructor.

Portfolio Outline

1.1 Awareness and appreciation

- 1.
- 2.
- 3.
- 4.

1.2 Earth processes and systems

- 1.
- 2.
- 3.
- 4.

1.3 Human Systems

- 1.
- 2.
- 3.
- 4.

1.4 Systems Thinking

- 1.
- 2.
- 3.
- 4.

1.5 Action strategies and skills

- 1.
- 2.
- 3.
- 4.

1.6 Personal and Civic Responsibility

- 1.
- 2.
- 3.
- 4.

Handout D.1

Activity #3: History of Environmental Education Timeline

AMERICAN NATURE STUDY SOCIETY (ANSS)

ANSS was organized to promote critical investigation of all phases of nature-study in schools, especially all studies of nature in elementary schools. ANSS was devoted to the appreciation and understanding of our natural world. ANSS' memorable seven-word slogan: **Excellence in Nature Study, Writing and Appreciation** gave it focus for a century. ANSS' publications, *Nature Study Review* and then, *Nature Magazine*, became a magnet for nature writers.

SOIL CONSERVATION SERVICE

Hugh Bennett, director of the US Soil Erosion Service spoke to Congress about the need to end destructive farming and ranching practices. As if on cue, the chamber was blackened by a cloud of soil that had blown in from the Great Plains states, a distance of 2,000 miles. Bennett's point had been made more powerfully than any words could express. Less than 2 weeks after that episode Congress passed the bill creating the Soil Conservation Service. Conservation, and the education for its need, had finally become a cause célèbre in the USA. Conservation education steadily gained momentum throughout the middle of the twentieth century and remains a robust part of the educational mosaic today.

NATIONAL EDUCATION ASSOCIATION

The National Education Association assumes a leadership role for conservation education in the schools.

WISCONSIN CONSERVATION EDUCATION STATUTE

Wisconsin becomes the first state to enact a state statute requiring preservice teachers to have "... adequate preparation in the conservation of natural resources."

IUCN – FIRST DOCUMENTED USE OF TERM ENVIRONMENTAL EDUCATION

Thomas Pritchard, Deputy Director of the Nature Conservancy in Wales, uses the term "environmental education" at the Conference for the Establishment of the International Union for the Protection of Nature (IUCN) in Paris. This is perhaps the first public professional use of the term.

CONSERVATION EDUCATION ASSOCIATION

The Conservation Education Association is formed to support the many educators working in the field of conservation education.

ASSOCIATION OF INTERPRETIVE NATURALISTS

The Association of Interpretative Naturalists (now the National Association for Interpretation) is formed.

RURAL STUDIES ASSOCIATION

Rural Studies Association, now known as the National Association for Environmental Education (NAEE), is founded in the United Kingdom.

RANGER RICK

The National Wildlife Federation publishes the first edition of *Ranger Rick's Nature Magazine* which is still going over 50 years later.

COUNCIL FOR ENVIRONMENTAL EDUCATION (UNITED KINGDOM)

The Council for Environmental Education (CEE) is the national strategic organization for environmental education in England. CEE's membership includes 73 national organizations and an ever-increasing, diverse network of organizations with interests in education, the environment and sustainable development.

ENVIRONMENTAL EDUCATION (JOURNAL)

Professor Clay Schoenfeld begins the journal, *Environmental Education*, later renamed *The Journal of Environmental Education*.

Dr. William Stapp and his students at the University of Michigan formally develop and publish a definition of “environmental education” in the first edition of the journal.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The National Environmental Policy Act (P. L. 91-190) is passed. “The purposes of this Act are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.”

EARTH DAY

Gaylord Nelson, at the time a US Senator from Wisconsin, had for some time envisioned an environmental teach-in (modeled on civil rights and antiwar sit-ins) that would raise public awareness on critical environmental issues. Denis Hays, a Harvard law student collaborated with Nelson in enlisting the aid of campus activists from across the country for an environmental teach-in that became known as Earth Day. It involved an estimated 20 million people with participation by nearly 1,500 college campuses.

WESTERN REGIONAL ENVIRONMENTAL EDUCATION COUNCIL (WREEC)

WREEC (now the Council for Environmental Education) is created as a “... unique effort to create a partnership and network between education and natural resource professionals in support of environmental education.”

ADDRESS TO CONGRESS BY A PRESIDENT OF THE U.S.

It is also vital that our entire society develop a new understanding and a new awareness of man's relation to his environment—what might be called “environmental literacy.”

This will require the development and teaching of environmental concepts at every point in the education process.

NATIONAL ENVIRONMENTAL EDUCATION ACT

The National Environmental Education Act authorizes the creation of an Office of Environmental Education in the U.S. Dept. of Health, Education and Welfare; establishment of a National Advisory Council for environmental education; and establishment of a domestic grants program

NATIONAL ASSOCIATION FOR ENVIRONMENTAL EDUCATION

The National Association for Environmental Education (now the North American Association for Environmental Education or NAAEE) is founded. NAAEE is a professional association for environmental educators.

UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT

United Nations Conference on the Human Environment results in a declaration containing 26 principles. Principle 19 of the Stockholm Declaration specifically calls for "education in environmental matters, for the younger generation as well as adults." Recommendation 96 calls for the provision of environmental education as a means to address environmental issues worldwide.

INTERNATIONAL WORKSHOP ON ENVIRONMENTAL EDUCATION

Held in Belgrade, Yugoslavia and sponsored by the UNESCO, the workshop resulted in what became known as The Belgrade Charter. The Belgrade Charter built on the framework of Stockholm and described the goals, objectives, audiences, and guiding principles of EE and proposed what has become the most widely accepted definition of EE: *Environmental education is a process aimed at developing a world population that is aware of and concerned about the total environment and its associated problems, and which has the knowledge, attitudes, motivations, commitments, and skills to work individually and collectively toward solutions of current problems and the prevention of new ones.*

PROJECT LEARNING TREE

Western Regional Environmental Education Council (now the Council for Environmental Education) and the American Forest Institute (now the American Forest Foundation) develop the environmental education program Project Learning Tree.

INTERGOVERNMENT CONFERENCE ON ENVIRONMENTAL EDUCATION

The definitive codification of EE as an international enterprise ultimately came out of the world's first Intergovernmental Conference on Environmental Education held in Tbilisi, Georgia, USSR. The document now known as *The Tbilisi Declaration* was formulated during this conference and in many quarters remains the definitive statement on what EE is and ought to be.

AUSTRALIAN ASSOCIATION FOR ENVIRONMENTAL EDUCATION

Australian Association for Environmental Education is founded.

FOUNDATION FOR ENVIRONMENTAL EDUCATION

Members of the European delegations to Tbilisi found the Foundation for Environmental Education in Europe to implement the conference recommendations. This organization later expands beyond Europe and currently manages a number of international programs, including Eco-Schools, Green Key, Blue Flag, Learning About Forests, and Young Reporters.

ENVIRONMENTAL EDUCATION ASSOCIATION OF SOUTHERN AFRICA

Environmental Education Association of Southern Africa is founded.

PROJECT WILD

WREEC and the Western Association of Fish and Wildlife Agencies develop Project WILD. Project WILD sponsors conservation and environmental education programs with a focus on wildlife for grades K-12.

CENTER FOR ENVIRONMENTAL EDUCATION

Centre for Environment Education (CEE) was established as a Centre of Excellence of the Ministry of Environment and Forests, Government of India. As a national institution, CEE's mandate is to promote environmental awareness nationwide.

BRUNTLAND REPORT

The World Commission on Environment and Development publishes the *Brundtland Report*. Also known as *Our Common Future*, this report introduced the idea of sustainable development in which environmental protection and economic growth are viewed as interdependent concepts.

UNITED CHURCH OF CHRIST COMMISSION FOR RACIAL JUSTICE

The United Church of Christ's Commission for Racial Justice issues the report *Toxic Wastes and Race in the United States: A National Report on the Racial and Socioeconomic Characteristics of Communities with Hazardous Waste Sites*.

RHODES UNIVERSITY, SOUTH AFRICA

The Murray & Roberts Chair of Environmental Education is founded at Rhodes University in Cape Town, South Africa. The Chair establishes Rhodes as a leading organization for environmental education research and academic training in Africa.

NATIONAL ENVIRONMENTAL EDUCATION ACT

U.S. Congress passes the National Environmental Education Act (P. L. 101-619). The act authorizes the following: An Office of Environmental Education in the U.S. Environmental Protection Agency; An environmental education and training program; environmental education grants; student fellowships; the President's Environmental

Youth Awards; the Federal Task Force and National Advisory Council; the National Environmental Education and Training Foundation (NEETF)

ENVIRONMENTAL JUSTICE

The First **National People of Color Environmental Leadership Summit** is held in Washington, DC. Summit participants adopt the Principles of Environmental Justice. The following year the U.S. Environmental Protection Agency establishes the Office of Environmental Justice.

CONFERENCE ON ENVIRONMENT AND DEVELOPMENT

The United Nations conducts the Conference on Environment and Development in Rio de Janeiro, Brazil. Chapter 36 of Agenda 21 focuses on “reorienting education towards sustainable development; increasing public awareness; and promoting training.”

GUIDELINES FOR EXCELLENCE

The North American Association for Environmental Education initiates the ***National Project for Excellence in Environmental Education*** which provides guidelines for the development and assessment of EE materials as well as benchmarks for practitioner and student knowledge on environmental topics.

PROJECT WET

The Council for Environmental Education and The Watercourse initiated Project WET (Water Education for Teachers). Project WET facilitates and promotes awareness, appreciation, knowledge, and stewardship of water resources in students K-12.

INTERNATIONAL CONFERENCE ON ENVIRONMENT AND SOCIETY

UNESCO conducts the *International Conference on Environment and Society: Education and Public Awareness for Sustainability*, in Thessaloniki, Greece (also known as Tbilisi+20). Nearly 1,200 experts from 84 countries attend the conference, which results in the Declaration of Thessaloniki.

AUSTRALIAN NATIONAL ACTION PLAN

The Australian government publishes a *National Action Plan* for integrating environmental education in both formal and non-formal education sectors.

JOHANNESBURG SUMMIT

The United Nations Commission on Sustainable Development holds the Johannesburg Summit in Johannesburg, South Africa. “The summit brought together tens of thousands of participants to focus the world’s attention and direct action toward ...conserving our natural resources in a world that is growing in population, with ever-increasing demands for food, water, shelter, sanitation, energy, health services and economic security.”

DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

The Centre for Environment Education holds the Education for a Sustainable Future Conference in Ahmedabad, India, the first international gathering of the UN Decade of Education for Sustainable Development (2005-2014). More than 800 learners, thinkers, and practitioners from over 40 countries attend the conference. Conference participants produce the Ahmedabad Declaration on education for sustainable development.

NCATE STANDARDS

National Council for the Accreditation of Teacher Education (NCATE) adopts EE standards in 2007, thus holding EE teacher training programs in NCATE-accredited colleges of education to high standards of performance.

NO CHILD LEFT INSIDE

The United States House of Representatives overwhelmingly passed the *No Child Left Inside Act* introduced by Representative John Sarbanes (Maryland) in a bi-partisan vote of 293-109 (the bill failed to pass the United States Senate and become law).

This legislative effort is supported by the No Child Left Inside Coalition, which was led by the Chesapeake Bay Foundation and included more than 2,000 environmental, educational, business, health care, faith-based, and other organizations from all 50 states, representing more than 50 million people.

ROSA PARKS AND GRACE LEE BOGGS OUTSTANDING SERVICE AWARD

NAAEE launches a new award in honor of activists Rosa Parks and Grace Lee Boggs. Each year, this award recognizes a person of color for leadership in educating and promoting action to support environmental education and environmental justice at the local, state, or global level. The first recipient of the award was Abby Ybarra, a member of the Yaqui Nation and educational consultant at Project Indigenous.

GREEN RIBBON SCHOOLS

The U.S. Department of Education launches the Green Ribbon Schools Award to recognize schools, districts, and institutions of higher education.

DEVELOPING A FRAMEWORK FOR ASSESSING ENVIRONMENTAL LITERACY

NAAEE releases *Developing a Framework for Assessing Environmental Literacy*, a comprehensive, research-based description of environmental literacy.

TAIWAN EE ACT

The Taiwan Environmental Education Act - one of the most comprehensive in the world - comes into force. In addition to providing funding for EE and a system of professional certification, the act requires that government agencies, enterprises, organizations and schools to implement no less than four hours EE every year. This means that even the President must have four hours a year of environmental education.

NATURAL START ALLIANCE

The Natural Start Alliance is a network of people and organizations that believe that all young children need frequent opportunities to experience, learn from, and care for nature and the environment through high-quality education. The Alliance, a project of the North American Association for Environmental Education, serves as a backbone organization to focus and amplify the collective impact of the people and organizations that share this common vision.

EVERY CHILD SUCCEEDS ACT

The *Every Child Succeeds Act* becomes law, replacing *No Child Left Behind*. The much-anticipated bill includes language that, for the first time, supports opportunities to provide students with environmental education and hands-on, field-based learning experiences.

GLOBAL ENVIRONMENTAL EDUCATION PARTNERSHIP

At the NAAEE conference in Madison, Wisconsin, the Global Environmental Education Partnership (GEEP) celebrates its North American launch. The GEEP is a global partnership committed to advancing environmental literacy to create a more just and sustainable future through the power of education. GEEP's founding partners are the U.S. Environmental Protection Agency, the Taiwan Environmental Protection Administration, and NAAEE.

30 UNDER 30

Each year, NAAEE recognizes individuals from around the world who are making a difference through environmental education.

UNITED ARAB EMIRATES (UAE)

The United Arab Emirates (UAE) signed an agreement with the International Renewable Energy Agency (IRENA) to cooperate in the integration of renewable energy and sustainable development in the UAE's education system.

UNESCO GREENING EDUCATION PARTNERSHIP

The Greening Education Partnership (GEP) is a global initiative that takes a whole-of-system approach to support countries to tackle climate crisis by harnessing the critical role of education. As a collaborative platform for governments and other stakeholders including inter-governmental organizations, civil society, youth, academia, and private sector, Greening Education Partnership aims to deliver strong, coordinated and comprehensive action that will prepare every learner to acquire the knowledge, skills, values, and attitudes to tackle climate change and to promote sustainable development.

Handout E

Activity #4: Comparing Environmental Education and Education for Sustainable Development

Environmental education did not evolve in isolation. It has built from and contributed to the evolution of a number of education fields. Understanding how EE is similar to and different from these fields can be instructive. In this activity, participants will compare two fields, environmental education and education for sustainable development.

Procedure:

1. Review Resource #3 Educational Movements Related to EE (p. 98), with a focus on the descriptions of environmental education and education for sustainable development.
2. Use the chart (below) to compare environmental education and education for sustainable development.
3. Be sure identify the characteristics that apply to both environmental education and education for sustainable development.

Characteristics of Environmental Education	Characteristics of Both	Characteristics of Education for Sustainable Development

Handout F

Activity #5: Do's and Don'ts

Procedure

1. Read the following scenario.
2. Imagine you are giving some guidance to civics teachers who will be teaching about a controversial issue that they care deeply about, as individuals, such as gun rights, whether the death penalty should be abolished, or whether animal testing should be banned.
3. What would be your advice: What would be on your “do’s” and “don’ts” list for high-quality instruction?
4. Write down your list of “do’s” and “don’ts.”
5. With others in your class, compile a group list of “do’s” and “don’ts.”
6. Revisit your group “do’s” and “don’ts” list. With an environmental education lens:
 - What items would you add to your “do’s” and “don’ts” list? Why?
 - What would you delete or change? Why?
7. Update your list.

Scenario

A public middle school civics teacher in a politically polarized community is preparing to teach a unit about political parties during an election year. The teacher wants to include a discussion of public policy stands on controversial issues such as abortion, immigration, and the death penalty. This teacher will need to discuss with students these current issues and how different candidates approach those issues.

If you were giving some guidance to civics teachers, what would be on your “do’s” and “don’ts” list for high-quality instruction?

Handout G

Activity #7: Analyzing Instructional Approaches

Procedure:

1. Take a moment to think about one of your favorite instructional approaches or teaching methods. What makes it so special for you?
2. Brainstorm common instructional strategies used in environmental education. Write these on a piece of paper.
3. Read **Key Characteristic #5: Planning Environmental Education** (pp. 57-67) in the *Educator Guidelines*.
4. Compare your list of instructional strategies (Step #2) to the list of Approaches to Environmental Education Instruction (Resource #8, pp. 106-108). You may also want to take a look at the approaches used to enhance civic engagement (Resource #14, pp. 121-123).
5. Select one instructional strategy to explore further, either from your list or the list in the *Educator Guidelines*.
6. Using the Internet or other research resources, research an instructional approach.
7. Complete the form below (A – E).
8. Once you have completed your analysis, create a poster that reflects your thinking.
9. Email you completed poster or a photo of your poster to your instructor before the next class meeting.

Instructional Approach: _____

A. Brief Description of the Instructional Approach

B. Example Activity: How can this instructional approach be used in environmental education?

C. Knowledge of Learners: How might you adapt this method for use with an adult audience? Preschoolers? Learners with developmental disabilities?

D. Setting for Instruction: Describe any specific concerns or considerations.

E. Technology: What technologies might be used to assist learning?

Handout H

Activity #8 Educator Observation Rubric

Which Guideline were you assigned? _____

Procedure:

1. Read your assigned Guideline (e.g., 6.2, 6.4, 6.6).
2. Review the rubric template.
3. Read the example and consider how the criteria, *Organizing physical space*, is elaborated across four levels of educator application, starting with the highest level of success (Highly Effective) and ending with the lowest level (Does Not Meet Expectation).
4. Individually or as a group, determine what criteria should be used to gauge the novice educators' ability to apply your assigned guideline. Write at least three criteria in the left-hand column.
5. Taking one criterion at a time, write a description for each of the four levels (e.g., Highly Effective, Effective, Improvement Necessary, and Does Not Meet Expectation). Each should describe a different level of success. You may want to begin by writing a description of what it means for an educator to be Highly Effective and then write a description of what it means if the teaching Does Not Meet Expectation. Then, complete the middle two levels, Effective and Improvement Necessary.
6. Review your work. Be prepared to discuss how you addressed the inclusion of all learners.

Educator Observation Rubric

Criteria	Highly Effective	Effective	Improvement Necessary	Does Not Meet Expectation
Example: <i>Organizing physical space</i>	<i>The classroom environment is safe, and learning is accessible to all participants, including those with special needs. The educator makes effective use of physical resources, including computer technology. The educator ensures that the physical arrangement is appropriate to the learning activities. Participants contribute to the use or adaptation of the physical environment to advance learning.</i>	<i>The classroom is safe and participants have equal access to learning activities; the educator ensures that the furniture arrangement is appropriate to the learning activities and uses physical resources, including computer technology, effectively.</i>	<i>The classroom is safe, and essential learning is accessible to most participants. The educator makes modest use of physical resources, including computer technology. The educator attempts to adjust the classroom furniture for a lesson or, if necessary, to adjust the lesson to the furniture, but with limited effectiveness.</i>	<i>The classroom environment is unsafe or learning is not accessible to many. There is poor alignment between the arrangement of furniture and resources, including computer technology, and the lesson activities.</i>

Handout I

Classroom Garden

Grades K-4

Objectives

Learners will understand that some foods are sustainable and can be regrown from scraps, then used in a meal.

Materials Needed

lettuce leaves, pineapple top, celery bottom, potato peelings with eyes, several small planters, several bowls with water, mister

Procedure

1. Ask students where vegetables come from.
2. Ask students if they know how to grow a plant like lettuce or potatoes.
3. Discuss how each of these plants grow over time.
4. Explain to students that some plants can be grown from other pieces of the same type of plant that we typically throw away, such as the bottom of a celery stalk or the peeling on a potato.
5. Show students the plant pieces that will be planted and a whole plant if available. Ask students if they think new plants will grow from the clippings. Have students guess how long it will take to grow each new plant.
6. Allow students to plant each new plant. Also allow students to care for and monitor the plants daily.
7. As plants reach maturity, prepare and invite students to taste a healthy snack from what they grew.

Adapted from Willis, A. (n.d.) Classroom Garden From Trash, Lesson Plans, Teacher.org,
<https://www.teacher.org/lesson-plan/classroom-garden-from-trash/>

Handout J Self-Assessment

Using the *Environmental Educator Knowledge & Skills: Guidelines for Excellence* as a set of potential benchmarks, carefully reflect on your competencies as an environmental educator.

Key: L...Lacking B...Basic P...Proficient D....Distinguished

#1 Environmental Literacy

	L	B	P	D
Awareness and appreciation				
Earth processes and systems				
Human systems				
Application of systems thinking				
Action strategies and skills				
Personal and civic responsibility				

COMMENTS:

#2 Foundations of Environmental Education

	L	B	P	D
Fundamental characteristics & goals of EE				
Environmental education practices				
Evolution of environmental education				

COMMENTS:

#3 Professional Responsibilities of the Environmental Educator

	L	B	P	D
Exemplary environmental education practice				
Environmental information, misinformation, and disinformation				
Facilitation of critical thinking and action skills				
Reflective and reflexive practices				
Ongoing learning and professional development				

COMMENTS:

#4 Commitment to Community, Collaboration, and Fairness	L	B	P	D
Community-centered				
Collaboration and belonging				
Fairness				
COMMENTS:				
#5 Planning Environmental Education	L	B	P	D
Instructional planning				
Knowledge of learners				
Environmental education materials and resources				
Settings for instruction				
Curriculum and program planning				
Tools and technologies that assist learning				
COMMENTS:				
#6 Implementing Environmental Education	L	B	P	D
Instructional methods				
Collaborative and welcoming learning environment				
Inquiry-based				
Exploration of worldviews and perspectives				
Promotion of civic engagement and action				
Flexible and responsive instruction				
COMMENTS:				
#7 Assessment and Evaluation	L	B	P	D
Outcomes: Plan with the end in mind				
Learner assessment that is part of instruction				
Program evaluation				
Improving instruction, program design, and materials				
COMMENTS:				

