Non-Formal Environmental Education Certification Project

PARTICIPANTS' MANUAL

Pennsylvania Association of Environmental Educators (PAEE)

Pennsylvania Association of Environmental Educators (PAEE) thanks the members of the working group that dedicated their time, expertise, and experience to complete EE Certification for Non-Formal Environmental Educators in Pennsylvania.

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Thank you also to the members of the PAEE Board of Directors for their assistance and support during the time that the certification program was being developed.

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Chapter One-- Introduction to the Project. What is the Pennsylvania Association of Environmental Educators (PAEE) Certification Project and how does it fit with the North American Association for Environmental Education's (NAAEE) national certification program?

WHAT?

The PAEE Non-Formal Certification Project is a rigorous process that documents and then certifies that an educator possesses the skills and knowledge necessary to be an exemplary environmental educator.

WHO IS THE TARGET AUDIENCE FOR THE PROGRAM?

The certification is primarily for non-formal educators—those who work at nature centers, parks, early childhood educators, and state agencies such as the Pennsylvania Game Commission, the Pennsylvania Fish & Boat Commission, etc.

WHO DEVELOPED THE PROGRAM?

PAEE is the coordinating and controlling entity for the Pennsylvania Non-Formal Environmental Education Certification Project. It establishes the criteria for certification, administers the certification process, and awards certification when criteria are met.

The PAEE program is part of a national environmental educator certification effort coordinated and structured by the North American Association for Environmental Education. State environmental education organizations adapt and implement the national program to fit their needs and abilities.

WHY NAAEE?

- Participants and employers know that the program is backed by a well-respected national organization
- NAAEE has done the basic organization and laid the foundation for a successful certification program—PAEE didn't need to start from scratch
- Reciprocity—educators certified by PAEE retain that certification if they move to another state that is certified through the NAAEE certification program

Chapter Two-- Overview of Certification. What it is and reasons why PAEE wants to have it.

Individuals who work in professions that do not require some form of certification before they are allowed to practice often find themselves in a "second class" career situation.

On one hand, we have doctors, lawyers, plumbers, school teachers, electricians, physical therapists, real estate agents, physician's assistants, architects, engineers, environmental professionals and nurses who must pass some test or certification process before they can pursue their careers. On the other hand, we have individuals in a large group of professions who may be well-prepared to <u>do</u> their jobs, but who are less able to <u>prove</u> their ability to do so. This group of professions includes non-formal environmental educators, adult educators, workforce development professionals, trainers, strategic planners, life coaches, health aides, community organizers, community educators, authors and performing artists.

WHAT CHARACTERISTICS ARE COMMON TO THE SECOND GROUP OF CAREERS?

1. They tend to be paid significantly less than members of the first group (and their pay is often based upon grants or soft money).
2. They often have degrees in fields unrelated to their jobs.
3. Conventional wisdom has it that "anybody" could do their jobs (and "anybody" often does).
4. They tend to be the first group laid-off and the first to be replaced by volunteers.
5. During times of economic hardship, this group often has a very hard time finding employment.
6. Employers often find it difficult to quantify non-formal experience, making these educators more difficult to hire.

Many professions that fall within the second group (including workforce training professionals, adult educators, and non-formal environmental educators) are searching for ways to increase their career credibility through the development of some type of externally-validated certification. PAEE's affiliation with the nationally-recognized NAAEE certification

program provides non-formal EE practitioners in Pennsylvania with an excellent opportunity to solidify their resumes while validating their skills and knowledge of the field.

There are many reasons for the field of non-formal environmental education to develop a valid, fair and substantive credentialing process, including:
1. Insuring that EE practitioners can serve their clients in a highly professional, state-ofthe-art manner;
2. Establishing a minimum standard of knowledge and practice for certification;
3. Providing EE practitioners with a nationally-recognized credential showing that they have met these standards;
4. Encouraging EE practitioners to update their knowledge and skills to at least the established minimum levels;
5. Providing employers of EE practitioners with a knowledge and practice base that they can rely upon—both in depth so that they have a solid foundation for their work and in breadth so that they have the capability to perform well as they change jobs in today's fluid work environment;
6. Guiding higher education professionals in the development of appropriate programs for EE practitioners;
7. Providing for a standard of ethics and accountability within the field; and
8. Providing for reciprocity of certification when practitioners move between states.

What positive outcomes will result in the long-term from a successful non-formal EE certification in Pennsylvania?

1. Non-formal EE professionals will be recognized as valuable contributors to the educational community, helping to prepare both children and adults to create a more sustainable and earth-friendly future.
2. Employers of EE professionals will select certified applicants when hiring, knowing that these individuals will be the most knowledgeable, effective and current.
3. The non-formal EE field will be uniformly staffed by high quality professionals with a strong knowledge foundation and well-crafted educational skills. It will be clear that "just anybody" couldn't do their jobs. They will be respected for these skills and paid (and retained) accordingly.
4. Non-formal EE professionals will be able to teach effectively in multiple classroom or outdoor setting and to diverse audiences.
5. Non-formal EE professionals will be able to effectively teach adults about new environmental trends and topics as they arise, including sustainability, green buildings, natural gas drilling, etc.   Because they are able to do this, they will be seen as valuable contributors to economic growth and statewide prosperity.

Chapter Three-- Requirements for Certification--Tasks to be completed for certification and how these tasks will be assessed

WHAT DOES A PERSON DESIRING CERTIFICATION NEEDS TO DO?

1. Apply

2. Take (and pass) Environmental Education K-12 Praxis Test. The test code number is 0831. The six content areas are:

- Nature of Environmental Science Education: Inquiry, Methodology, and Techniques
- Principles of Ecology
- Life Sciences as Relevant to Environmental Science Education
- Earth and Physical Sciences as Relevant to Environmental Science Education
- Humans and the Environment
- Environmental Laws, Regulations, and Socioeconomic Factors

3. Complete a Work Sample/Portfolio *under the guidance of a mentor. The Portfolio will include the following:*

WHAT	WHY
Core Environmental Education Work Sample (see Appendix A)	To provide a core example of competencies in the applicant's chosen field
Alternative Target Audience Environmental Education Internship (See Appendix B)	To provide evidence of flexibility and breadth in alternative work situations different from the core work field
Alternative Population Environmental Education Internship evaluation (completed by a supervisor during alternate work experience; see Appendix B)	To provide evidence that the alternative work experience was completed to the required standard
Two or four-year degree plus three-years' experience, or (only for the first three years of the program) a description of experience plus justification for exemption from degree requirements. (See Appendix C)	To provide evidence of completion of a degree program or evidence of equivalent work experience.
Diversity, Foundations, and Safety Self-Guided Assessment (Appendix D)	To provide evidence of reflection and assessment of a candidate's knowledge in these areas.

4. Select and read five books and/or resources from PAEE's recommended reading list and submit a one page summary of your reflection of each book.

(See Appendix L. Resources such as the following:
- *A Sand County Almanac by Aldo Leopold*
- *Silent Spring by Rachel Carson*
- *The Quiet Crisis by Stewart L. Udall*

5. Become familiar with the history of environmental education by selecting three books/resources from PAEE's recommended reading list. (See Appendix S. Resources such as the following:
- The Essentials of Environmental Education for Pennsylvania (Modules I, II, & III).
- The Roots of Environmental Education: How the Past Supports the Future. Stevens Point, WI: EETAP.
- UNESCO-UNEP. (1976). "The Belgrade Charter." *Connect: UNESCO-UNEP Environmental Education Newsletter*, Vol. 1(1): 1-2.
- Tbilisi Declaration from the Intergovernmental Conference on Environmental Education in Tbilisi, Georgia USSR 1977
- Earth Education. . . A New Beginning by Steve Van Matre

6. Attend two professional conferences or workshops --one PAEE's annual conference and another similar conference or workshop. Attend these meetings to further develop skills as an environmental educator. Present CEU verification papers as proof of attendance.

7. Take on line or in person CEU courses of at least three hours covering each of the following three areas: safety, foundations of EE, and diversity. PAEE will provide an approved list of courses or you can propose and alternative. Present CEU verification papers as proof of attendance.

8. The candidate has three years to complete the certification process.

USING A MENTOR

During the process of becoming a Non-Formal Environmental Educator, you might want to think about asking someone to be your mentor. A mentor is an individual, someone who has valuable experiences. A mentor is a guide or a coach who helps another individual's development. A mentor is someone who can provide you with advice, guidance, motivation and role modeling.

1. How will I find a mentor? The Pennsylvania Association of Environmental Educators (PAEE) has a list of individuals who have been working in the field of environmental education. The individuals were asked to participate by PAEE because they are professionals in our field who have a tremendous amount of experience and expertise.

Mentors can also be found in your place of work. Is there someone whom you admire and respect? Someone who has always impressed you with their breadth of knowledge, wisdom and passion?

2. What things should be considered when choosing a mentor?

- Has interests similar to yours
- Someone who has skills in an area I do not
- Easy to work with
- Someone who can make connections with others in my field
- Willingness to put the candidate's interests before theirs
- Someone who is well respected in their field
- Has a breath of knowledge in the candidate's field
- Provides direction

STEP BY STEP GUIDE TO THE CERTIFICATION PROCESS--To become a certified non-formal environmental educator in Pennsylvania, you must complete the following steps and produce the following products:

STEP	PRODUCT	
1. Complete and submit the application form (Appendix R) along with a check for the required amount and a letter of support	Submitted application form, check for application fee, and a letter of recommendation	
NOTE—THE FOLLOWING STEPS MAY BE TAKEN IN ANY ORDER		
2. Take (and pass) Environmental Literacy Test.	Certificate provided by the testing company indicating that you have passed	
3. Arrange for a mentor to assist with your program (optional).	Letter from mentor indicating that they will work with you	
4. Complete a Work Sample/Portfolio *under the guidance of a mentor if desired*		Core EE Work Sample (see Appendix A)
		Alternative Population Environmental Education Internship (See Appendix B)
		Alternative Population Environmental Education Internship Evaluation (See Appendix B)
		Completed Degree or Work Experience Assessment Form (See Appendix C)
		Completed Diversity, Foundations, and Safety Self-Guided Assessment (Appendix D)

5. Select and read five books and/ resources from PAEE's recommended reading list. (See Appendix L)	List of which five books you read and one page on your reflection of each book
6. Become familiar with the history of environmental education by selecting and reading at least three of the books/resources in Appendix S.	List of which three books you read and statement that you read and studied them
7. Attend two professional conferences or workshops --one PAEE's annual conference and another similar conference or workshop. Attend these meetings to further develop skills as an environmental educator.	Present CEU verification papers as proof of attendance.
8. Take on line or in person CEU courses of at least three hours (combined) covering each of the following three areas: safety, foundations of EE, and diversity. PAEE will provide an approved list of courses or you can propose and alternative.	Present CEU verification papers as proof of attendance
9. Read and sign the Certification Program Code of Ethics. (Appendix G)	Program Code of Ethics signed by you
10. Assemble all material in a portfolio and submit through your liaison to the Advisory Board	Completed portfolio
11. Respond to questions from the Advisory Board as needed	Written response from you to questions asked

Chapter Four--Governance. HOW WILL THE PROGRAM BE STRUCTURED AND ADMINISTERED?

1. PAEE is the certifying agent for the PAEE Non-Formal Environmental Education Certification Project. The office for certification is the office or home of the current President of PAEE

2. The Project has a Certification Advisory Board to administer the Project and review applications. It will be made up of representatives of a statewide coalition of stakeholder groups that reflects the diversity composition within the state, which includes:

    • at least two members representing the certifying agent
    • at least one member from the NAAEE Affiliate
    • additional members representing at least 6 of the following 7 categories: ○ Formal education community ○ Environmental education non-profit ○ Federal or state natural resource agency ○ Higher education institution ○ Environmental nongovernmental organization ○ Graduates of accredited EE certification program ○ Business/industry

3. The Program Administrator is the Chair of the Certification Advisory Board with support from the PAEE President and any staff.

4. PAEE will provide training for Advisory Board members on the NAAEE Guidelines for the Preparation and Professional Development of Environmental Educators (NAAEE, 2OO4). This will be done at the PAEE annual Conference for those who have not already received such training.

5. The Chair will appoint one of the Board members to serve as a liaison to the Board for each applicant.

Appendix A
Core Environmental Education Certification Work Sample
Verifying Positive Impact through Program Participation

Overview of Project: You will prepare an Environmental Education program/activity and present this experience in an appropriate venue. This may be a school, a park, an environmental learning center, or some other location. In order to be considered an education experience, participants should learn something through their participation. Be sure to use an appropriate program for this assessment. This work sample will provide verification that participants have benefitted from participation in the program or activity you have planned and implemented. Each item meets one or more expectations for environmental educators as noted in the NAAEE "Guidelines for the Preparation and Professional Development of Environmental Educators". This comprehensive work sample will provide evidence of your ability to:
   1. Engage in effective planning;
   2. Use best practices that provide opportunities for success;
   3. Use appropriate assessment strategies to foster and document the ongoing development of participants' knowledge or skills; and
   4. Analyze assessment results, reflect on them, and adapt programs or activities accordingly.

Required Components of the Work Sample

Title Page
Pennsylvania Environmental Education Certification Work Sample
Your name
Date
Site Name and Location
Age and Number of Participants, Subject, Topic, and Key Resources (materials, equipment, and features of your site or location that are essential for this activity)

A. Description of the Learning Environment and Program/Activity
1. Describe the site (school/park/center/other) where this program/activity was delivered in one paragraph (name of learning site, basic demographic information, and any adaptations or accessibility modifications that expand participation opportunities) (**Planning and Implementing 6, Fostering Learning 1, 2**).
2. Describe your program or activity and explain how it fits the mission and goals of this site. How does it provide a setting that encourages exploration and reflection? (**Planning and Implementing 7, Fostering Learning 2**)
3. Describe the participants in the group(s) included in your work sample: age(s), gender, ethnicity, developmental characteristics (cognitive, social, physical), language, learning background, academic performance, etc., as appropriate. (Do not use actual names in this report.) (**Planning and Implementing 1**)

B. Foundations and Background

This section should briefly (1-3pages) highlight background information and your own preparation as an environmental educator. This serves to show how you have prepared yourself to be an effective EE advocate through research about the history, delivery, culture, and assessment of programming beyond your own organization.

1. Define Environmental Education. What are the goals of EE? Differentiate between nature study, conservation education, outdoor education and environmental education. How have these changed over time? Explain the difference between advocacy and education, and explain how they affect EE. (**Foundations 1, 3**)

2. Identify at least three different groups or organizations that deliver EE programs or materials, and briefly describe the types of EE opportunities they offer. Do they offer formal or informal programs? Are they linked to other institutions (schools, businesses, government agencies, etc?) How do school and government policies affect these and other EE efforts? If identified on the materials, websites, or elsewhere, what funding sources are used to support these programs? How do they demonstrate exemplary practice for school or community engagement? (**Foundations 2, Professional Responsibilities 1**)

2. Briefly describe the integration of culture, interdisciplinary connections and technology. Describe three types of instructional tools or technologies and explain how they can be used in instructional situations. (**Planning and Implementing 5**)

3. Identify two curriculum materials/resources (e.g. book, video, website, poster, etc.) and explain how each can be used to teach a specific concept or idea. (**Planning and Implementing 4**)

4. Explain three different data collection tools that would be effective for assessing the impact of EE programs. (e.g. questionnaires, models, field identification, nature journals, or informal question and answer sessions) How are they similar? How are they different? What kinds of programs or activities would each one be used for? Why? Why is it important to assess EE programs and activities? (**Assessment and Evaluation 2, 4**)

C. Planning for EE Instruction

1. Identify a rationale. Address the principal reason for the study of this topic, noting how this project fits into your definition of EE. (Why should participants know the information? Where does this specific activity fit in the broad spectrum of EE, as discussed above?) (**Planning and Implementing 3**)

2. Identify prerequisite skills. What do participants need to know or be able to do in order to take part in this? (Even very young children may need to be able to follow directions, or make observations based on colors or shapes, for example.) How will you determine whether the participants have these skills? How does your project address the process of developing awareness, knowledge and understanding of environmental concepts? (**Planning and Implementation 1, 2, 3**)

3. Write and present a detailed project/activity plan, including title and length/duration of project/activity and the sequence of activities or events. Describe how you will use at least *two* instructional methodologies from the following list and explain why you have chosen each one to enhance the learning experience: hands-on/minds-on activity, cooperative learning, inquiry based learning, simulation, investigating environmental issues, community based problem solving, case studies, service learning. (**Planning and Implementing 2, 3; Fostering Learning 3**)

4. Describe how the program/activity can be used to support one or more PA Environment and Ecology Standards, Science and Technology Standards, Geography Standards, or other relevant content areas (these can be found at https://www.pdesas.org/Standard.) (**Professional Responsibilities 1**, **Assessment and Evaluation 1**)

5. Explain how this project or activity will promote environmental literacy. This can include outcomes such as developing inquiry or interpretation skills, describing an environmental issue or process, acknowledging citizen rights and responsibilities, or building skills for understanding environmental issues. (**Environmental Literacy 1, 2, 3, 4**)

D. Assessment of Participant Knowledge

Provide evidence of formal and/or informal assessment of your participants' knowledge to show that they have learned through participation in your activity by considering the following points:

1. How are you evaluating what your participants already know about this topic? Explain why they will benefit from doing this activity. What are your intended outcomes? (**Assessment and Evaluation 1**)

2. Describe at least **one formative assessment** conducted during the program/activity. How do you know that participants are learning from the activity? For example, are you asking questions or having them find examples? How will you modify instruction if participants are not grasping the topic or information? Describe any modifications you might make for special needs participants, as appropriate. (**Fostering Learning 3**, **Assessment and Evaluation 2, 3**)

3. Describe your **final evaluation (e.g., questionnaire, project, discussion, journal.)** Did participants gain the benefit(s) you intended? How do you know? Did you ask questions or have them complete an evaluation of some kind? When appropriate, include 2 or more actual samples (or pictures) of participant work that demonstrate different levels of achievement. (Remove names!) If there was no final evaluation for the program such as a summer camp, explain how formative assessments for individual activities were used to determine overall program effectiveness. (**Assessment and Evaluation 3, 4**)

4. Explain how the assessments you chose for this activity measure the intended outcomes. How are they aligned with the instructional objectives you identified? (**Assessment and Evaluation 1**)

E. Analysis of Participant Learning

This section will include the following two parts:

1. Participants. This section will include a summary of the outcomes resulting from instruction. *Do not use the participants' real names*. Write a brief summary about participant performance, noting specific individuals or groups who gained more than expected, or who struggled with the activity. How did their background, age, or previous experience affect their performance? Offer an explanation for their success or failure, based on your knowledge of these participants (**Fostering Learning 3, Assessment and Evaluation 3, 4**).

2. Interpretation of Results. This section will provide interpretation and explanation of your assessments. Discuss the assessments you used. Were they appropriate for evaluating the success of your program? Did several participants struggle with one or more specific questions or activities? Why? How could you adapt the program or activity to be more effective? Did your assessments (oral questions, questionnaires, etc.) accurately measure the project outcomes? What would you change

in this activity if you were to teach it again? Explain how you used these results to determine the impact of your program/activity. (**Assessment and Evaluation 3, 4**)

F. Reflection on Teaching Effectiveness and Professional Growth
Reflect on the effectiveness of your instruction and any plans to modify future instruction to better meet students' needs.
1. Explain how your project/activity successfully stimulated participants' interest in the environment. Be sure to identify the degree to which your objectives were achieved. Was it very successful? Was it less effective for some groups than others? If some objectives were not achieved, reflect on possible reasons for this. What changes would you make to offer a more effective learning experiences for a similar group? For a different group? Describe at least two ways. (**Fostering Learning 1, 2**)
2. Discuss your most significant insight about student learning from presenting this activity or program. Link this insight to your discussion of types of EE you discussed in **B. Foundations of EE**. How would you use this experience to develop another project/activity? What would you do in a similar fashion? What would you change? Why? (**Assessment and Evaluation 2**)
3. Discuss a plan for your continued development as an EE provider. What additional pedagogical or content knowledge would help you be more effective? How will you stay current on trends and new ideas for programs, instructional tools, technology, and assessment? Are there specific topics, strategies, instructional practices or assessment tools that would help you be a better EE provider? How are you monitoring your effectiveness and growth as an educator? (**Professional Responsibilities 1, 3**)
Outline a plan for developing these skills through professional development activities.

Your work sample project will be evaluated using the rubric that is attached.
This project was adapted from the Oklahoma State University's "Clinical Practice (Student Teaching) Work Sample" assignment. Many thanks to Nadine Olson for sharing this with us.

Environmental Education Work Sample Evaluation Rubric

	Target 3	Acceptable 2	Unacceptable 1
A. Description of Learning Environment and Program/Activity	Description consists of a **full, detailed** description of the location or site, the program or activity and the learners. Relevance of this program or activity to the organization's mission is clearly explained.	Description includes basic relevant information about the location or site, program, or learners. Relevance of this program or activity to the organization's mission is briefly identified.	Description is incomplete and/or missing key information on one or more items. This program or activity is not linked to the organization's mission.
B. Foundations and Background	Discussion of EE background, history, opportunities, cultural impact, curriculum materials, and assessment tools is complete and detailed. References to locally relevant resources are highlighted and thoughtfully evaluated.	All required topics are identified and briefly discussed, and references are appropriately cited. Local connections are not clearly made.	Some topics are not addressed at all or are poorly supported by references.
C. Planning for EE Instruction, Part 1	1. Program or activity effectively addresses a rationale for the topic related to local and broader EE objectives.	1. Activity addresses a rationale relevant to local objectives.	1. Activities may not address required program standards.
C. Planning for EE Instruction, Part 2	2. Prerequisite skills or knowledge are identified and explained.	2. Prerequisite skills are identified.	2. Prerequisite skills are not identified.
C. Planning for EE Instruction, Part 3	3. Project plan is detailed and clearly written, and includes a description of and justification for at least two instructional methodologies incorporated in the program.	3. Project plan is complete and includes a description of at least two instructional methodologies used in the program.	3. Project plan is incomplete. Instructional methodologies are not identified or described.

C. Planning for EE Instruction, Part 4	4. Multiple relevant PA Standard(s) are identified and links to the project or activity are clearly explained.	4. At least one relevant PA Standard is identified and tied to the project or activity.	4. PA Standards may or may not be identified.
C. Planning for EE Instruction, Part 5	5. Program includes activities that clearly develop environmental literacy through outcomes such as such as describing an environmental issue or process or developing interpretation skills.	5. Activity addresses environmental literacy outcomes.	5. Project/activity includes no activities that demonstrate development of environmental literacy skills.
D. Assessment of Participant Knowledge	Assessment plan is clearly outlined and explained, including evaluation of prerequisite skills, formative and summative assessments, modifications, and alignment of assessments with program or activity objectives or outcomes. Samples of assessments from program participants are included, as appropriate.	Formative and summative assessments are described and linked to program/activity objectives.	Assessment(s) are identified, but are not clearly described or linked to program objectives.
E. Analysis of Participant Learning, Part 1	1. A thorough, detailed analysis of formative and summative assessments is included.	1. Analysis of assessments is complete and effectively presented.	1. Analysis of assessment results may lack details or may not be effectively presented.

E. Analysis of Participant Learning, Part 2	2. Effectiveness of the assessments is discussed. Potential revisions to improve value of the evaluation tools is clear and detailed, relating to specific examples. Reflection on participant performance is thorough and insightful.	2. A discussion of the assessment tools and a rationale for the quality of participant performance is incorporated. Reflection on participant performance is present but limited in scope.	2. Reflection does not include a discussion of assessment effectiveness or explanations for participant performance.
F. Reflection on Program Effectiveness and Professional Growth, Part 1	1. Reflection on program effectiveness is detailed and thorough.	1. Reflection on program effectiveness is satisfactory.	1. Reflection on program effectiveness is superficial.
F. Reflection on Program Effectiveness and Professional Growth, Part 2	2. Candidate proposes a systematic, effective plan for improving participant performance based on results of this evaluation. Commentary is linked to learning theories discussed in **B. Foundations and Background** and discusses how they relate to educational practice in an environmental setting.	2. Candidate offers several ideas for improving the activity based on results of this evaluation and proposes appropriate changes to improve performance. Commentary links learning theories from **B. Foundations and Background** to practice.	2. Ideas offered by candidate for improving participant performance are inadequate and/or ineffective and may not be based on the results of this evaluation. Commentary does not link general or specific theories to practice.
F. Reflection on Program Effectiveness and Professional Growth, Part 3	3. Candidate outlines a detailed and insightful plan to improve their preparation as an EE provider. Specific programs, content, and/or skills are identified and discussed. A plan for monitoring growth and effectiveness as an educator is described, identifying specific goals and desired outcomes.	3. Candidate offers multiple suggestions for professional development experiences. A plan for monitoring growth and effectiveness as an educator is outlined.	3. Candidate includes limited options for professional development. No plan is described for monitoring growth and effectiveness as an educator.

Candidate Name_____

Date _____

Core Environmental Education Work Sample Score Sheet

SCORING:
_____pts. A. Description of Learning Environment and Program/Activity
_____pts. B. Foundations and Background
_____pts. C1. Planning for EE Instruction
_____pts. C2. Planning for EE Instruction
_____pts. C3. Planning for EE Instruction
_____pts. C4. Planning for EE Instruction
_____pts. C5. Planning for EE Instruction
_____pts. D. Assessment of Participant Knowledge
_____pts. E1. Analysis of Participant Learning
_____pts. E2. Analysis of Participant Learning
_____pts. F1. Reflection on Program Effectiveness and Professional Growth
_____pts. F2. Reflection on Program Effectiveness and Professional Growth
_____pts. F3. Reflection on Program Effectiveness and Professional Growth

_____Total Score from above

 Core Environmental Education Work Sample Assessment
____ 33-39 Target
____ 24-32 Acceptable
____ 0-23 Unacceptable

COMMENTS:

PAEE Alternate Demographic Experience (ADE)

Objective of the assignment:

During your internship experience, you will design and teach one or more activities to a group of individuals from a different demographic group than the one you used for your EE Work Sample, in order to demonstrate that you can develop educational programming suitable for multiple groups and settings. Demographic variables might include age, gender, ethnicity, setting (rural, urban, school classroom, outdoor classroom, etc.), or socio-economic status, although there are many more that could also be appropriate.

You will document your activities for assessment according to the attached rubric. You must achieve a rating of Acceptable or Target to meet this requirement. Your plan must document how you addressed all of the required elements (identified by the appropriate NAAEE "Guidelines for the Preparation and Professional Development of Environmental Educators", noted in **bold print**).

In addition, the **Performance-Based Assessment** <u>must be completed by a supervisor or internship coordinator</u> at this location while you are presenting your activities. (See EE Performance- Based Assessment rubric for details.) This offers the opportunity for more objective assessment of strengths and weaknesses, and supports continued professional growth and reflection.

Successful completion of this assessment will demonstrate that you have effectively developed activities that meet the needs of varied audiences. In addition, an observation rubric completed by your internship supervisor will provide corroborating evidence that you have planned and provided appropriate instruction to meet your objectives. Please use the rubric to guide your work; it gives you the precise ways you will obtain points for your work.

Required components of the ADE:

Title page
- Pennsylvania EE Certification Alternate Demographic Experience
- Your name
- Date of report
- Site Name and Location
- Age and Number of Participants, Subject, Topic, and Key Resources (materials, equipment, and features of your site or location that are essential for this activity)
- Internship Supervisor: _____

A. Description of the Learning Environment, Activity and Participants

1. Describe the site where you completed your ADE. You should include the name of learning site, basic descriptive information, and any adaptations or accessibility modifications available at that location. Include a brief description of the activities you will be providing at this location. Be sure to discuss how the setting and activities differ from those used in your Work Sample project. **(Planning and Implementing 6, Fostering Learning 1, 2)**

2. Describe the participants in your ADE project: age(s), gender, ethnicity, developmental characteristics (cognitive, social, physical), language, learning background, academic performance, etc., as appropriate. Highlight similarities and differences between this group and the participants in your Work Sample project. How does this impact what you will do and how you will do it? (Do not use actual names in this report.) **(Planning and Implementing 1)**

B. Learning Objectives

1. What is it that you want your participants to learn through the activities you are providing? Are these objectives readily observable or measurable?   Are they appropriate for the group you are teaching? **(Foundations 1; Planning & Implementation 1)**

2. How will you know the participants learned the concept you presented? It is essential that you know what you want participants to take away from your activities, and to be able to determine whether they actually did! What are the actual skills, behaviors, products or knowledge that indicate mastery of your learning objectives?   How will you know if participants met these learning objectives? Have you addressed all of the objectives in your activities? **(Assessment & Evaluation 1, 2, 3)**

3. What should the participants know before they can complete these activities? How will you know whether they have this prior knowledge? How will you help them recall this prior knowledge? Why is this information important/relevant to the participants**?** **(Professional Responsibilities 2)**

C. Pedagogy, Organization, Assessment

1. Do your activities contain appropriate environmental science content for the demographic group you are instructing? Is it logically organized? Do skills and understanding build on previous knowledge and activities, as appropriate? **(Professional Responsibilities 2; Planning & Implementation 1)**

2. Are appropriate technologies employed? This can include equipment, books, computers, notebooks, etc. Do not get caught up in trying to make things more complicated than necessary- sometimes a pencil is enough technology for an activity! Does your teaching approach use varied instructional strategies (e.g. lecturing, field experiences, hands-on activities, creative opportunities) to engage participants? Are adaptations for individuals with diverse needs identified and used for reflection and improving instruction?   Is

educational technology used to enhance learning when appropriate? **(Professional Responsibilities 5, Planning & Implementation 1, 2; Fostering Learning 2)**

3. Do the assessments match the objectives? Do they address more than one level of thinking (look up Bloom's taxonomy for help with this)? How do you know that the participants understand the information you intended them to learn? **(Assessment & Evaluation 1, 3, 4)**

D. Science Content and Context

1. Is the topic of your activities appropriate for the demographic group? Is the environmental science content correct? Is information in the activities accurate and current? What resources were used to develop your activities? Include a complete Bibliography of the resources used to develop these activities and assessments. **Professional Responsibilities 1, 2; Planning & Implementation 1)**

2. Are personal perspectives of participants, cultural values of the community, and issues important to society, as they relate to the content, considered in the plan? **(Professional Responsibilities 2; Planning & Evaluation 1; Fostering Learning 1)**

E. Appendix

The appendix should include copies of all activity materials included in this assessment, along with all supporting materials (handouts, assessments, etc.)

Rubric for Alternate Demographic Experience

Part I   Learning Objectives

	3 = Target	**2 = Acceptable**	**1 = Unacceptable**
1A. Description of Learning Environment and Program/Activity	Description consists of a full, detailed explanation of the location or site and the program or activities.	Description includes basic relevant information about the location or site, and activities.	Description is incomplete and/or missing key information on one or more items.

1A. Description of Participants	The description and comparison of participants from the ADE and Work Sample projects is thoughtful and detailed.	A brief description and comparison of participants from the ADE and Work Sample projects is included.	There is little or no description or discussion comparing participants from the ADE and Work Sample.
1B. Learning Objectives	One or more activities are identified and at least two learning objectives are included for each activity, **and** Each objective is performance based, **and** Each objective is measurable in amount and accuracy.	One or more activities are planned, but there are less than two learning objectives for each activity, **or** some of the objectives are not performance based, **or** some objectives do not have a measurable characteristic.	One activity is planned, but there are less than two learning objectives for planned activities, **and** some of the objectives are not performance based, **and** Some objectives do not have a measurable characteristic.
1C. Pedagogy, Organization, Assessment	All learning objectives are referenced to EE standards or content, and there are multiple assessments within the activities	Most learning objectives are referenced to EE standards or content, and there are multiple assessments within the activities	Some learning objectives are referenced to standards or content, and there are few assessments within the activity.
1D. Science Content and Context	Each activity lists specific prior knowledge required to learn the content	Each activity lists most of the specific prior knowledge necessary to learn the content	Activities may or may not identify some of the specific prior knowledge necessary to learn the content

Part I Objectives	Score
1.a Learning objectives	

2.b Standards referenced	
3.c Prior knowledge	
Total	

Part II   Pedagogy, Organization, Assessment

	3 = Target	2 = Acceptable	1 = Unacceptable
2A Lessons/Activities contain appropriate domain content.	Many of the activities demonstrate EE concepts appropriate for the intended audience.	Some of the activities demonstrate EE concepts appropriate for the intended audience.	Few or none of the activities demonstrate EE concepts appropriate for the intended audience.
2B Lessons/activities use acceptable instructional strategies, adaptations, and technologies	Acceptable instructional strategies are included throughout the activities, and adaptations are included as appropriate, and educational technology is	Acceptable instructional strategies are included in many of the activities, and adaptations are included as appropriate, and educational technology is	Acceptable teaching strategies are included in few or none of the activities, or few adaptations are included where appropriate, or educational technology is

	included in each activity as appropriate	included in each activity as appropriate	missing in activities where it could be appropriately used
2C Lesson/activity assessments are aligned to objectives with multiple assessments	Every learning objective in the activities is addressed by at least one assessment, and there are multiple assessments in the series of activities.	Many of the identified learning objectives are addressed by assessments in the activities, and there are multiple assessments in the series of activities.	Few or none of the learning objectives are addressed by assessments in the activities, and there are assessments are not identified the activities.

Part II Pedagogy	Score
2.a Science content	
2.b Teaching strategies	
2.c Assessments	
Total	

Part III   Science Content, Context, and Learning

	3 = Target	2 = Acceptable	1 = Unacceptable
3A Accuracy of domain content	Environmental science content is accurate, **and** current, **and**	Environmental science content has one error in one of these areas: accuracy, **or**	There are one or more errors in one or more of these areas, accuracy, **or** current, **or**

		current, **or** appropriate level	appropriate level
	at the appropriate level for the demographic group	current, **or** appropriate level	appropriate level
3B The series of lessons/activities includes context for the domain content	The activities effectively include rich context such as: Methods of inquiry, and Strategies for strong participant engagement	The activities addresses the context of the unit, and many of the activities implement methods of inquiry, and strategies for strong participant engagement	Activities address the context of the unit but do not effectively implement methods of inquiry, or strategies for participant engagement
3C Personal and Social Perspectives	The activities address and effectively implement personal perspectives, **and** cultural values, **and** societal issues	Activities address and contain some references to personal perspectives, **and** cultural values, **and** societal issues.	Activities do not address or contain few references to personal perspectives, **or** cultural values, **or** societal issues.
3D Science in community	The activities addresses and effectively shows the relation of science/community, **and** reveals collaboration with the community. Complete bibliography demonstrating research and	The activities address and identify the relation of science/community, **or** reveals collaboration with the community. A bibliography demonstrating appropriate research is included.	The activities do not identify the relation of science and community, **or** note collaboration with the community. Bibliography is very limited or is not included.

	reflection is included.		
3E Reflection / action	The activities include instructor reflection and notes several specific actions to improve instruction.	The activities include instructor reflection and notes some specific actions to improve instruction.	The activities include little or no instructor reflection and do not include specific actions to improve instruction.

Part III Context and Growth	Score
3.a Domain content	
3.b Student context	
3.c Perspectives	
3.d Science in Community	
3.e Reflection	
Total	

Summary Scoring for
EE Alternate Demographic Experience

	Score
Part I Objectives	

1.a Learning objectives	
1.b Standards or EE content referenced	
1.c Prior knowledge	
Total	
Part II Pedagogy	
2.a Science	
2.b Teaching strategies	
2.c Assessments	
Total	
Part III Context and Growth	
3.a Domain content	
3.b Student context	
3.c Perspectives	
3.d Science in Community	
3.e Reflection	
Total	

TOTAL SCORE:
0-23 points Unacceptable

23-27 points Acceptable
28-33 points Target

In addition, candidates must score Acceptable (2 points) or more in 8 of 11 areas, and 23 points or more overall, to pass the Alternate Demographic Experience requirement (i.e., to achieve an Acceptable or Target rating).

EE Alternative Demographic Experience - Supervisor's Evaluation
This form is to be completed by a supervisor observing the candidate during their EE ADE with an alternative demographic group. This rubric is designed to assess the candidate's ability to provide adequate instruction to a second demographic group beyond that of the original work sample. These competencies are outlined by NAAEE (identified in **bold print**), the accrediting body for Environmental Education.

Planning & Preparation	Target (2)	Acceptable (1)	Unacceptable (0)

1. Candidate demonstrates adequate knowledge of major ecological principles and demonstrates effective communication skills, instructional strategies and teaching techniques for diverse audiences **(Environmental Literacy 4; Planning & Implementing EE 1)**	Candidate clearly connects content to major ecological principles. Prior knowledge and misconceptions are evaluated. Activities are designed to meet specific needs of the target audience, using varied teaching techniques and instructional strategies. Communication is clear and effective.	Major ecological concepts are identified. Candidate communicates effectively, using instructional strategies or teaching techniques that are appropriate, but may not be specifically tailored to the target audience.	Candidate does not clearly highlight major ecological principles. Communication is stilted or unclear. Instructional strategies and teaching techniques are not designed with the target audience in mind.
2. Candidates demonstrate adequate knowledge of PA Environmental Science Standards and the ability to use them to guide instructional planning. **(Professional Responsibilities 3)**	Plans and implements activities that effectively address appropriate EE content standards and objectives. Learning objectives are measurable and appropriate for participants in the context of this activity.	Plans activities that address required EE content standards and objectives. Most learning objectives are measurable and are appropriate to participants in the context of this activity.	Activities do not clearly address EE content standards, or contain inaccurate information. Learning objectives are not measurable and do not address adaptations appropriate for participants in the context of this activity.
3. Candidates demonstrate adequate knowledge of different instructional methodologies, incorporating multiple strategies in their program or activities. **(Planning & Implementing EE 2)**	Candidate actively seeks knowledge of students' levels of development and their backgrounds, cultures, skills, language proficiency, interests, experiences, and special needs from a variety of sources prior to planning activities. Programs and activities incorporate multiple teaching methods.	Candidate understands the active nature of learning and obtains information about levels of development for groups of participants prior to planning. Instructional methodologies show limited variation across activities.	Candidate indicates a little or no understanding of how individuals learn and of participants' backgrounds and special needs. Instructional methodologies show no variation through program or activity.

4. Candidate demonstrates the ability to use formative and summative assessments to meet individual learner's needs and to demonstrate successful completion of program goals and objectives. **(Fostering Learning 1, 2 Assessment & Evaluation 2, 3)**	Formative assessments are consistently used to modify activities throughout the program, as appropriate. Rationale for making changes is clearly identified. Candidate incorporates checks for understanding and interest during and at the completion of the activities.	Formative assessments are used to modify activities or classroom features to improve student learning. Changes are identified but the rationale is not clearly explained. Candidate incorporates checks for understanding and interest at the end of the program or activity.	Assessments are not used in planning activities, or other features of the learning process. Changes that are made are not identified or explained. Candidate does not include checks for participants' understanding or interest.
Instructional Delivery	**Target (2)**	**Acceptable (1)**	**Unacceptable (0)**
1. Candidate uses effective verbal and non-verbal communication techniques. **(Planning & Implementing EE 1, 2)**	Candidate maintains eye contact, provides appropriate, clear and concise directions, uses proper sentence structure, articulates clearly, uses appropriate non-verbal cues, and uses appropriate volume.	Candidate maintains eye contact, provides clear directions, and uses proper sentence structure and volume.	Proper volume is not used, little or no eye contact maintained, some language is not proper or some non-verbal cues are inappropriate.
2. Candidate uses a variety of instructional strategies suitable for diverse audiences which provide evidence of student engagement and learning. **(Planning and Implementing EE 1, 2; Assessment & Evaluation 3)**	Age- and skill- appropriate activities are used during the activities to engage participants in learning and/or assessments. Participants are grouped appropriately without bias to gender (unless is it important to the lesson).	Appropriate instructional activities/assessments are used. Participants are grouped appropriately.	No evidence is shown that the instructor thought about the age or skill level of the participants.
3. Candidate identifies and implements appropriate visual	Multiple technologies are identified and used to	Technology enhances the lesson and is used	Appropriate visual aids and technology are not used to enhance the lesson.

aids and technology as effective teaching and learning tools. **(Planning & Implementing EE 5)**	enhance the program or activities. Visuals and teaching aids are appropriate for the activity and are designed for effective communication.	appropriately. Visuals and teaching aids are appropriate for the activity.	
4. Candidate uses active student engagement during instructional delivery throughout program or activities. **(Planning & Implementing EE 1, 2; Professional Responsibilities 7)**	Candidate regularly engages participants actively in the learning process through learner-centered activities such as appropriate questioning, group work, investigating issues, case studies, and other appropriate and challenging activities that promote active involvement.	Candidate incorporates learner-centered activities such as questioning, group work, seat work and other activities that promote participation.	Candidate uses an approach that focuses primarily on direct learning; participants remain passive for most of the lesson.
5. Candidate uses formal and/or informal assessment strategies to determine whether goals and objectives were met. **(Assessment & Evaluation 2, 3, 4)**	Systematically measures learning throughout the program or activities using formal and/or informal assessments such as discussions, Q and A, individual work, group activity or other assessments. Uses assessment measures throughout the lesson that are appropriately aligned with learning objectives; are thoughtful and	Incorporates formal and/or informal assessments such as discussions, Q and A, individual work, group activity or other activities to gauge learning. Uses appropriate assessment measures aligned with learning objectives to gauge the extent of learning.	Pays little attention to checking on learning throughout the lesson and beyond. Uses assessment measures that do not provide useful feedback on the extent to which learning objectives are achieved by all participants.

	effective in providing feedback on the effectiveness of instruction and the extent of learning.		
Learning Environment	**Target (2)**	**Acceptable (1)**	**Unacceptable (0)**
1. Candidate demonstrates a personal commitment to appropriate and respectful interactions with and among participants. **(Professional Responsibilities 1, 2; Planning & Implementation 1)**	Candidate consistently promotes and demonstrates personal commitment to appropriate and respectful interactions with and among participants.	Candidate acknowledges the importance of appropriate and maintains respectful interactions with and participants.	Candidate offers limited evidence of personal commitment to appropriate and respectful interactions with participants, and/or does not foster this among participants.
2. Candidate maintains an environment designed to enhance learning opportunities for all participants. **Planning & Implementation 1, 3; Foundations of Learning 1, 2)**	Candidate consistently maintains an environment designed to enhance positive and inclusive learning opportunities for participants in programs or activities.	Candidate creates and generally maintains an environment that supports positive and inclusive learning opportunities.	Candidate demonstrates inconsistent or limited evidence of preparation of a learning environment that supports positive and inclusive learning opportunities.

Alternative Demographic Experience - Supervisor's Evaluation

Competency Area	Score (Target-2pts, Acceptable-1pt, or Unacceptable-0pts)	Comments
Planning and Preparation		
1		
2		
3		
4		

Planning and Preparation score		
Instructional Delivery		
1		
2		
3		
4		
5		
Instructional Delivery score		
Learning Environment		
1		
2		
Learning Environment Score		
Total Score	**/22**	

Target: 18-22pts   Acceptable: 11-17pts   Unacceptable: 0-10pts

Appendix C
Degree Exemption Evaluation

In order to evaluate your request for a degree exemption, we require the following:

-A **thorough resume** detailing specific jobs held, names of employers, dates of employment, responsibilities of the positions held, a list and description of publications and grants, and any other pertinent information.

-**Reference letters** from your most recent employer(s) verifying all details of the employment mentioned in the resume.

-All **academic/continuing education records**, including transcripts, copies of diplomas, course and workshop descriptions, and relevant documentation for any educational programs completed.

Checklist for review of exemption documents (Please add rows as needed or continue on a separate sheet of paper):

Employment History						
Job Title	Employer Name	Length of Employment	Description Provided	Reference Letter Provided		Approved Y/N
Comments from reviewer:						

College Coursework				
Course Name/Number	College or University Attended	Course Hours	Description Provided	Transcripts 'rovided

Comments from reviewer:

Continuing Education Workshops						
Workshop Title	Agency Providing Training	Workshop Hours	Description Provided			Approved Y/N

Comments from reviewer:

Publications						
Publication Title	Journal or magazine where published, if applicable	Date of Publication	Publisher	Brief description of publication		

Comments from reviewer:			
Approved for Exemption	Yes	No	Date reviewed

Signature of PAEE Reviewer _____

Appendix D
Diversity, Foundations of EE, and Safety Self-Guided Assessment
Foundations of Environmental Education, Diversity and Safety Independent
Study Assessment

Please answer the following questions. **For each question, you should cite appropriate references in your response**. See the attached reading list for suggestions, but you are not limited to these publications; relevant websites may also be used. Please include a References Cited section at the end of each response. Responses will be assessed on completeness, appropriateness of the response, variety of sources cited, and writing quality (spelling, grammar, punctuation, etc.)

1.   When presenting environmental education programming, you can expect to work with diverse groups and individuals. Diversity means much more than simply race, gender or special needs. Identify several diverse populations you might expect to work with in an EE setting, briefly describe your philosophy of teaching and explain how those identified diverse experience(s) have affected your philosophy. Include such things as the effect of education expectations on student outcomes, building self-esteem, and relating to students. Using examples, describe how your philosophy of teaching translates into actual methods and strategies of teaching a diverse audience. Include such things as how to promote equity in a diverse classroom, how to establish an accepting climate and how to plan effective instruction to meet individual and group needs.

2.   The field of environmental education does have a history. It has evolved over time and continues to evolve as new challenges become apparent to those of us who call ourselves environmental educators. Please trace the historical development of the field of EE, beginning in the late 19th century to the present. Discuss each of the milestones in that history (e.g. conservation education). Then, does your program align itself mostly with the current concept of EE, or does it tent to connect more strongly with one of the field's predecessors? Please explain. Finally, discuss at least one new trend that you think will impact the future development of the field.

3.   Safety of the participants is something that is always a consideration in active, hands-on or outdoor activities. Please identify at least five different safety concerns, and note (1) what precautions you would take before an activity, (2) how you will plan for management of risk during

an activity, and (3) what you would do if a problem does occur for each of these safety concerns. Safety concerns might include allergic reactions, water hazards, or animals, for example.

4.   Included in the philosophy of environmental education has been the challenge of how to deal with issues. There have been many conversations over the years as to how to emphasize the development of students' critical thinking skills. At the cornerstone of that discussion has been the question of how to address controversial issues in teaching. Read at least three of the books identified on the EE Reading List, and use what you have learned from the readings to discuss the imperative to teach students "how to think" and not "what to think". Include the following topics in your response: How does EE apply to critical thinking skills? How will you encourage independent thought and respect for the environment in your programs?

Appendix F
PAEE Nondiscrimination Statement

Appendix G
Code of Ethics for Professional Environmental Educators in Pennsylvania

Purpose: 1 & 2 Statement of Purpose

The Pennsylvania Certified Environmental Educator shall:
1. Comply with standard practices and ethical conduct toward all students, whatever their developmental level, toward professional colleagues, school officials, program participants and members of the community, and shall safeguard academic freedom.
2. Maintain the dignity of the profession by respect and obeying the law, demonstrate personal integrity and conduct, and exemplify honesty.
3. Exemplify ethical relationships with colleagues, extend just and equitable treatment to all members of the profession.

In acceptance of a position of public trust, measure successes by the progress of each student toward the realization of his or her potential an effective citizen.

Requirements: [3]

1. The Code of Ethics must be signed by each certification applicant.
2. The Code of Ethics ensures that the certification candidates know and agree to model and uphold high values and standards in accordance with the National Association for Environmental Educators (NAAEE), commitment to quality in the Environmental Education (EE), profession.

Practice: 1,2,3,4

The Pennsylvania Certified Environmental Educator shall:
1. Not reveal confidential information of staff, program participants, etc. unless disclosures serve lawful professional purposes, or is required by law.
2. Comply with state regulations, written local school board policies, and other applicable local, state and federal laws.
3. Apply for, accept, offer, or assign a position or a responsibility on the basis of professional qualifications.
4. Endeavor to avoid situations where conflict of interest may arise.
5. Provide the most balanced and factual information possible.
6. Represent the facts and results of research accurately and adequately, not basing decisions on personal beliefs, political pressure or client or supervisor pressure.
7. Encourage the use of sound environmental education principles in management decisions.
8. Promote competence in the field of EE by supporting high standard of education, performance and employment practices.
9. Use monies, personnel, property, or equipment committed to his or her charge accordingly to accepted ethical standards.
10. Shall submit only accurate and honest requests for reimbursement, expenses, or pay.

11. Use institutional or professional privileges only in the appropriate context and not for personal or partisan advantage.
12. May accept gifts or tokens offered and accepted openly from students, parents, or other persons or organizations in recognition or appreciation of services. However, the educator shall not accept nor offer gratuities, gifts, or favors that impair professional judgment or obtain special advantage.
13. Shall keep accurate and honest records.
14. Conduct activities with honesty, fairness and respect.

Social Responsibility: [1,2,3,4]

The Pennsylvania Certified Environmental Educator shall:
1. Strive to be sensitive to cultural and individual differences including those due to age, gender, ethnicity, national origin, religion, sexual orientation, disability, and socioeconomic status.
2. Not engage in sexual or other harassment or exploitation.
3. Adhere to written policies, and state and federal laws regarding the hiring, evaluation, and dismissal of personnel.
4. Practice professional behavior that is free from sexual or other harassment or exploitation, or discrimination with respect to religion, gender, sexual orientation, race, national origin, age, or physical restrictions.
5. Ensure the participants remain safe by following approved safety and emergency practices, policies and procedures.
6. Not knowingly treat a participant in a manner that adversely affects the participant's learning, physical health, mental health, or safety.
7. Make sure the participants follow directions and use appropriate equipment.
8. Make sure supervision is adequate for the number of students.
9. Not exclude a participant from a program, deny benefits to a participant or grant an advantage to a participant on the basis of ethnicity, religion, national origin, age, gender, disability, sexual orientation, or socio-economic status.
10. Not solicit or engage in sexual conduct or a romantic relationship with a student.
11. Avoid situations where you would be alone with a student.
12. Not furnish alcohol or illegal/unauthorized drugs to any student or knowingly allow any student to consume alcohol or illegal/unauthorized drugs in the presence of the educator.
13. Follow sound environmental practices and obey all laws protecting plants, animals, property and the environment.
14. Ask permission from property owners before entering or picking or removing specimens.
15. Obtain all local, state, or federal permits and licenses required for collection or keeping of specimens for educational purposes.

I, _____, have read the above Pennsylvania Certified Environmental Educator's Code of Ethics and Standard Practices and pledge to comply with standard practices and ethical conduct.

Source of information:

[1]
   Sample Code of Ethics - Kentucky

[2]
   Sample Code of Ethics - Texas

[3]
   Attachment 2: Code of Ethics (minimum requirement)

[4]
   Sample Code of Ethics - Utah

Appendix J
Advisory Council Members, addresses, and areas of expertise covered

Name and Address	Area of expertise covered	Term length
Bires, Fran, Former Director – McKeever Center 487 Irish Ridge Road Sandy Lake, PA 16145 814-657-1414 fran.bires@gmail.com	Council President Volunteer Programs	3
Devlin, Jean, Chief Education and Interpretation Section DCNR, PA Bureau of State Parks PO Box 8551 Harrisburg, PA 17105 jedevlin@pa.gov	State Resource Agency	2
Hughes, Robert, Executive Director Eastern Pennsylvania Coalition for Abandoned Mine Reclamation (EPCAMR) 101 South Main Street Ashley, PA 18706 570 371-3523 rhughes@epcamr.org	EE Nonprofits	2
McCrea, Edward, President Environmental Education and Conservation Global 204 East Locust Street Coudersport, PA 16915 814 260-9138 emccrea@eecg.org	Federal Resource Agency	3
Roperti, Ruth Past President PAEE and Retired 3rd Grade Teacher 965 Edgewood Road Beaver Falls, PA 15010 724 843-7046 rroperti@zoominternet.net	Formal Education	3
Travis, Holly Assistant Professor-Biology Department Biology Education Coordinator Indiana University of Pennsylvania Indiana, PA 15705 814-591-6208 h.j.travis@iup.edu	Higher Education	3

Kester, Jessica Allegheny Land Trust 416 Thorn Street Sewickley, PA 15143	EE Nonprofits	2
412-741-2750 x210 (C) 814 937-7365 jkester@alleghenylandtrust.org		

MENTORS LIST

Belli, Angela
Harding, Melisa
Hill, Gail
McCrea, Ed
McKinney, Pat
Moore, Martha
Pennington, Dennis
Roperti, Ruth
Ruppert, Estelle
Scheivert, Jeremy
Simmons-Walker, Twila
Wasiesky, Steve
Weidensaul, Amy
Weilbacher, Mike

MENTOR'S POSITION DESCRIPTION

MENTORS FOR THE NONFORMAL CERTIFICATION PROJECT
of the
Pennsylvania Association of Environmental Educators
DUTIES and QUALIFICATIONS

The Pennsylvania Association of Environmental Educators (PAEE) is assembling a database of professional non-formal environmental educators to serve as mentors to candidates for certification in non-formal environmental education under PAEE's Certification Project.

Duties. Mentors are being asked to serve as volunteers who will work with a candidate to help guide their efforts to acquire and/or document the experience and expertise needed to be certified by PAEE. In particular, the mentor will help the candidate assemble the Portfolio and complete the other requirements specified for certification. (See the PAEE certification manual on the PAEE website for the specific requirements for certification.) Note: not all candidates will choose to work

with a mentor and some candidates may request more than one mentor to cover the assistance they feel they need.

Qualifications. Mentors must have a broad experiential and/or education base in non-formal environmental education. In addition, they must have considerable depth in one or more areas of non-formal environmental education.

Becoming a mentor.

- Prospective mentors are asked by PAEE to submit a one page summary with the following information— ○ Name and contact information (address, phone, and email)
    - ○ A summary of their experience and/or education in non-formal environmental education
    - ○ A summary of the broad expertise that a prospective candidate can draw on by working with the mentor
    - ○ A summary of the specific, in-depth expertise that he or she can supply ○ A statement of willingness to work as a volunteer mentor under the program
- Note: the supervisor for a candidate's Alternate EE Work Sample is considered a mentor and will be asked to fill out the one page summary sheet. However, this sheet will not be made available to other candidates unless the supervisor requests it.
- The information for all mentors will be reviewed as received and after approval by PAEE will be assembled in a database and provided to prospective candidates for certification.
- At this point, the candidate may contact any of the mentors directly who appear to have qualifications desired by the candidate. PAEE will have no role in matching candidates and mentors or establishing the terms of the relationship.
- The mentor and candidate should discuss the amount of time desired/available and anticipated expenses if any. (These will be the responsibility of the candidate not PAEE or the mentor, although the mentor may choose to help with any incidental expenses.)
- Mentors are expected to remain with a prospective candidate for a reasonable period of time in order to facilitate certification.
- Either the mentor or the candidate can withdraw from the relationship at any time for any reason without having to justify the termination of the relationship. However, it is expected that both the candidate and the mentor will attempt to work in a professional and harmonious manner and discuss any differences or difficulties before a mentoring relationship is terminated.

APPENDIX L
Program Resource Publication

Book List	**Author**
An Inconvenient Truth	Al Gore
A Sandy County Almanac	Aldo Leopold
Beyond Ecophobia	David Sobel
Blueprint for a Green Planet	John Seymour & Herbert Girardet
Cadillac Desert	Marc Reisner
Cradle to Cradle	William McDonough & Michael Braungart
Deep Ecology	Bill Devall & George Sessions
Desert Solitaire	Edward Abbey
Earth Education A New Beginning	Steve Van Matre
Earth in the Balance	Al Gore
Earth in Mind	David Orr
Entropy	Jeremy Rifkin
Extinction	Paul & Anne Ehrlich
Gaia: A New Look at Life on Earth	James Lovelock
Last Child in the Woods	Richard Louv
Listening Point	Sigurd F. Olson
New World New Mind	Robert Ornstein & Paul Ehrlich
Pilgrim at Tinker Creek	Annie Dillard
Practice of the Wild	Gary Snyder
Rights of Nature: A History of Environmental Ethics	Roderick Nash
Silent Spring	Rachel Carson
Storms of My Grandchildren	James Hensen
Sustaining the Earth	Tyler Miller
The Ecology of Commerce	Paul Hawken
The Diversity of Life	Edward O. Wilson
The Dream of the Earth	Thomas Berry
The Edge of the Sea	Rachel Carson
The End of Nature	Bill McKibben
The Geography of Childhood	Gary Paul Habhan
The Sea Around Us	Rachel Carson
The Story of Stuff	Annie Leonard
The Turning Point	Fritjof Capra
Walden	Henry David Thoreau

APPENDIX S
History of Environmental Education Publication/Resource list
Environmental Education Program Resources

- The Essentials of Environmental Education for Pennsylvania (Modules I, II, & III).
- The Roots of Environmental Education: How the Past Supports the Future. Stevens Point, WI: EETAP.
- UNESCO-UNEP. (1976). "The Belgrade Charter." *Connect: UNESCO-UNEP Environmental Education Newsletter*, Vol. 1(1): 1-2.
- Tbilisi Declaration from the Intergovernmental Conference on Environmental Education in Tbilisi, Georgia USSR 1977
- Earth Education. . . A New Beginning by Steve Van Matre

Appendix R
Program Application Form

PAEE

Pennsylvania | Association | of | Environmental | Educators

Environmental Education Certification
APPLICATION

To be considered for enrollment in the PAEE Non-Formal Environmental Education Certification Program, please submit this completed form and the letter of professional support to:

Fran Bires
487 Irish Ridge Road
Sandy Lake, PA 16145

You will be notified of a decision on your application within two weeks.

---

1. Contact Information

Name_____

Mailing Address_____

City_____ State_____ Zip_____ County_____

Phone_____ Email Address_____

Current Occupation or student level_____

Indicate the organization you are currently or recently associated with_____

2. Applicant Details
(please be as specific as possible. Use the back of this form or another page if needed)

a. What are your professional goals as they relate to environmental education?

b. How will Certification assist you in meeting these goals?

c. Describe your involvement, if any, in creating or using innovative environmental educational strategies.

d. Describe your involvement in furthering environmental education related to special audiences such as adults, urban audiences, etc.

* A letter of professional support from a supervisor or colleague, describing how certification will have a positive impact on you as an environmental educator must accompany this application.