

# IMPLEMENTING THE ELP: Schools and Classrooms



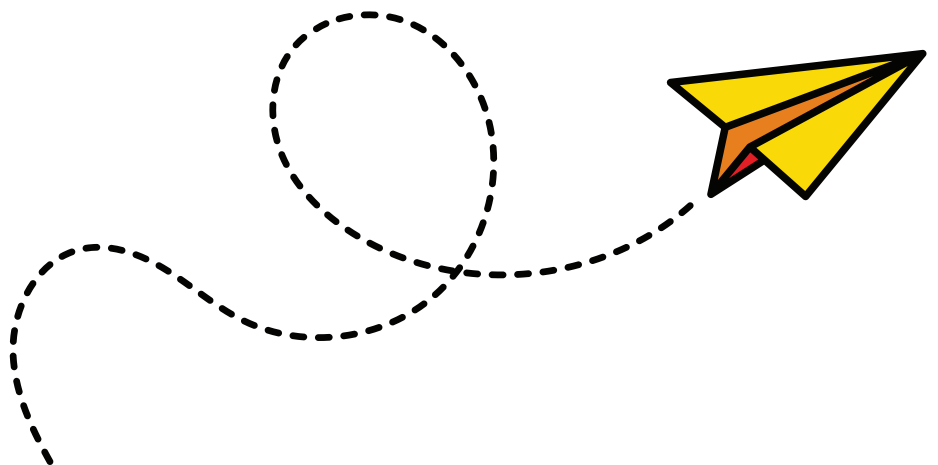


# Suggested Strategies



- 1 Teach multiple disciplines, including math, science, social studies, civics, English language arts, and art through an environmental lens. Integrate content from high-quality environmental education materials that correlate to the Standard Course of Study into the curriculum.
- 2 Weave environmental topics throughout the curriculum to provide a unifying theme that students can relate to, and as research suggests, to enhance learning. Maximize the potential of environmental education by providing students with connected, sustained opportunities to participate in direct outdoor learning experiences, citizen/community science, and classroom activities that increase awareness of environmental topics and content knowledge.
- 3 Create instructional ties to outdoor learning areas, including, but not limited to, student service learning, integration across content areas, safety education, healthy lifestyles, physical activity, nutrition, place-based education, project-based learning, citizen/community science, STEM initiatives, and nature play.
- 4 Participate in professional development opportunities focused on designing school grounds that incorporate natural areas, outdoor classrooms, outdoor teaching methods and best practices for outdoor learning.
- 5 Encourage extracurricular student academic and service-oriented environmental clubs. Provide professional development and additional compensation for club advisors. Participate in environmental competitions such as Science Olympiad, Envirothon, Blue Heron Bowl, and International Earth Science Olympiad, etc.
- 6 Provide students with opportunities to explore environmental solutions using new technologies in engineering, environmental science, sustainable energy, ecotourism, geosciences, biotechnology, forestry, agriculture, and other STEM fields.
- 7 Integrate outdoor field trips, service-learning experiences, and on-site outdoor learning experiences into the regular school curriculum at every grade level. Collaborate with local environmental education centers and public lands to offer events or other activities that focus on students' local natural resources and help students explore natural spaces close to home.

- 8 Provide students with equitable and culturally relevant environmental education experiences. Use the NAAEE Guidelines for Excellence in environmental education for support.
- 9 Use the school building to implement and teach sustainable practices such as energy and water conservation, air quality improvements, recycling, and food waste reduction efforts such as composting.
- 10 Support teacher participation in the NC Environmental Education Certification Program and provide incentives for teachers to complete their certification.
- 11 Partner with community organizations to provide service-learning projects and internships in STEM fields. Encourage students to complete service learning related to environmental issues in districts that have a community service graduation requirement.
- 12 Incorporate funds for environmental education into proposals for state and federal funding (e.g., ESSA funds).
- 13 Connect with agencies that provide information and data on the regional and local environment, such as air and water quality and land use. Incorporate the use and interpretation of this data into science and other school lessons and projects.
- 14 Encourage guidance counselors and CTE (Career and Technical Education) teachers to share various environmental career opportunities, two- and four-year degree programs, internships and college visitation opportunities with students.



**15** Seek funding, support and resources for designing, creating and using new areas for outdoor learning, or for the use of existing areas that include some of the following components:

- Use of native plants when possible.
- Restoration and creation of natural habitats that support pollinators and other wildlife
- Areas for unstructured play and exploration.
- Creation of gardens and other natural learning areas.
- Demonstration projects that enhance and demonstrate environmental quality best practices (e.g., stormwater management, erosion control, rainwater harvesting).
- Creation of outdoor gathering spaces that integrate nature.
- Use of model green schools program guidelines.
- Training on best practices for outdoor learning.
- Use of local rocks and minerals.
- Design of ADA-accessible outdoor classrooms, trails, facilities, and signage
- Develop partnerships with community organizations to support school ground improvements.
- Develop plans that thoroughly consider the administrative and staff support necessary for ongoing maintenance and protection of outdoor learning areas.

**16** Participate in “green school” programs such as the EnviroSmart Schools Program administered through Catawba College’s Center for the Environment, the US Department of Education’s Green Ribbon Schools program, the Schoolyard Habitat certification program through the National Wildlife Federation, and other credential programs that recognize and provide incentives to schools that are pursuing environmental literacy and sustainability initiatives.

**17** Participate in established programs that enhance outdoor learning environments for students of all ages, such as UTOTES (Using Outdoors to Teach Experiential Sciences), NWF Certified Wildlife Habitats, etc. Work with the school’s parent-teacher association or organization for support.

**18** Partner with educators looking for community-based partnership projects required for NC Environmental Education Certification to develop outdoor classrooms and learning labs, trails, weather stations, and gardens at their schools.



# IMPLEMENTING THE ELP: Nonformal EE Providers





## Suggested Strategies

- 1 Provide teachers with access to high-quality environmental education resources and professional development correlated to the NC Standard Course of Study.
- 2 Use the NAAEE's Guidelines for Excellence when developing or revising environmental education programs, outdoor experiences, and resources. Use environmental education lessons, activities, and curricula that focus on critical thinking, not issue advocacy.
- 3 Actively reach out to school audiences with concise summaries of available opportunities for programs and partnerships to make teachers aware of available resources.
- 4 Provide opportunities for students and teachers to investigate their local environment through field experiences and citizen/community science and outreach programs.
- 5 Speak at school career days and build partnerships with instructional coordinators and CTE teachers to encourage students to pursue environmental careers.
- 6 Provide resources and training to teachers on how to use school grounds and facilities for teaching the curriculum.
- 7 Develop lending programs for outdoor classroom materials (clipboards, magnifying glasses, portable whiteboards, etc.) and tools for community days (trail maintenance, garden days) for use on school property.
- 8 Improve your site, trails, facilities, and signage to improve accessibility for students with disabilities.



- 9 Provide resources, materials, training, and administrative support for teachers to use existing fields, woods, wetlands, creeks, landscaped areas, mowed greenspaces, and other natural areas on or near their schools for teaching across disciplines.
- 10 Support environmental education throughout a student's educational career through enrichment activities, track-out and summer camps, afterschool programs, volunteer opportunities, virtual learning days, Scout programs, family events, etc., so that there is a consistent, developmentally appropriate progression in each grade level.
- 11 Provide support via mentoring, additional staff support, additional planning support, etc., for teachers to design and implement lessons that gradually introduce students to the outdoors within the regular daily schedule.
- 12 Partner with schools to complete your community partnership project for North Carolina Environmental Education Certification.
- 13 Partner with local library programs to promote environmental education and science centers to families.
- 14 Review the environmental education programs of other organizations and facilities in your area before developing new services to understand gaps and opportunities.
- 15 Encourage staff to attend training on assessment and evaluation, classroom pedagogy practices, and the correlation of programming to the K-12 science standards,
- 16 Incorporate Methods of Teaching Environmental Education or other pedagogy courses in training plans for new staff members
- 17 Provide professional development for classroom teachers and other educators who use environmental education curriculum linked to the NC K-12 Standard Course of Study, providing ready-to-use lessons and activities that will help students achieve the learning outcomes in our state standards across multiple subjects and grade levels.



- 18 Provide documentation for professional development opportunities to fulfill the requirements for NC professional educator's license renewal (i.e., content, digital literacy, etc.) and for NC Environmental Education Certification credit.
- 19 Build relationships with instructional coordinators to better understand the needs of local teachers and share resources with teachers.
- 20 Evaluate workshops and other professional development in environmental education using the NAAEE Guidelines for the Preparation and Professional Development of Environmental Educators to ensure they are quality programs using best practices in the field.
- 21 Support universities and colleges that offer pre-service environmental education content and professional development: be a guest speaker, partner with classes on projects, and invite these classes to shadow your work.
- 22 Support staff in attending professional networking events, educator round tables, and other events that build relationships and promote the exchange of ideas.
- 23 Encourage staff to enroll and complete the NC Environmental Education Certification and recognize staff when they complete the program. For example: share newsletter articles, videos, or other communications features with your larger staff team and external contacts.
- 24 Use EE Certification for preference in hiring, advancement, and for performance reviews and offer pay incentives for employees to complete the program.





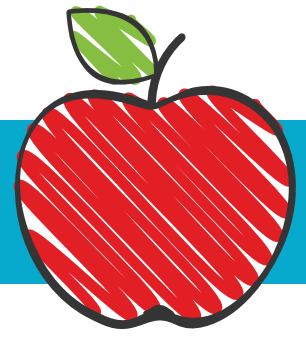
# IMPLEMENTING THE ELP: Statewide Agencies and Organizations



*Environmental Educators of North Carolina.  
Annual Conference Group Photo, 2023*

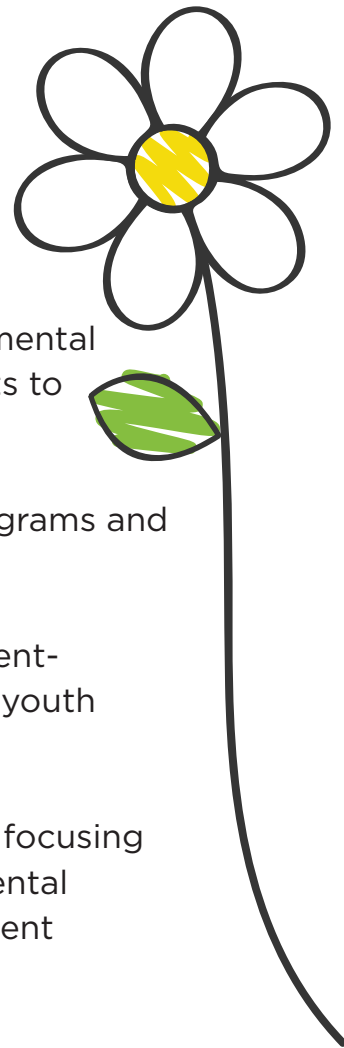


## Suggested Strategies

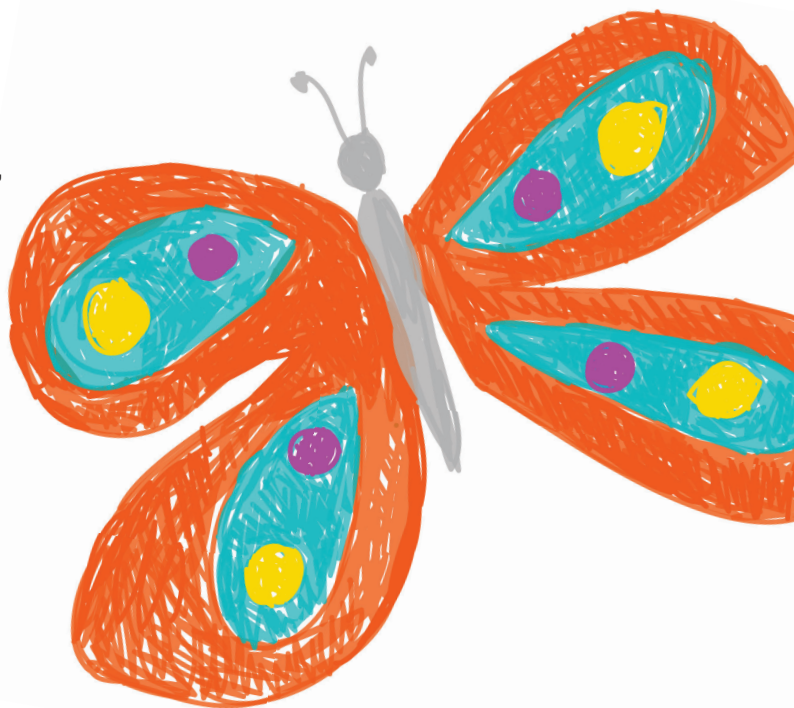


- 1 Encourage state leadership to make the Environmental Literacy Plan a priority based on the research-based benefits of environmental education and outdoor learning on academic performance and student well-being.
- 2 Provide guidance and resources to integrate environmental education into the K-12 curriculum and to align environmental education activities and programs with science and other school standards.
- 3 Facilitate collaboration between formal and nonformal educators to create opportunities for students and professional development for educators. Support ongoing efforts to bring teachers and nonformal educators together through professional networking, including regional and statewide opportunities and events.
- 4 Work with existing environmental education agencies and organizations, including the NC Office of Environmental Education and Public Affairs and the Environmental Educators of North Carolina, to connect teachers with existing opportunities and resources that support the Environmental Literacy Plan (ELP).
- 5 Provide teachers with high-quality, culturally responsive environmental education lessons, activities, and resources that are aligned with the North Carolina Standard Course of Study.
- 6 Advocate for incorporating environmental literacy instruction across multiple disciplines whenever educational standards are revised.
- 7 Seek the funding needed to increase student experiences, teacher training, on-site improvements, and other strategies to implement this plan.
- 8 Increase school boards' awareness of the ELP and of the resources available to support its implementation on the local and state levels. Schedule presentations and build relationships.

- 9 Provide resources, technical support, and promote opportunities for funding to help schools develop outdoor learning areas on the school grounds and to fund sustainability efforts in the school building.
- 10 Recognize teachers and school administrators for conservation and sustainability efforts through awards and certification programs, such as EnviroSmart Schools Program administered through Catawba College's Center for the Environment, the US Department of Education's Green Ribbon Schools program, and Schoolyard Habitat certification program through the National Wildlife Federation.
- 11 Encourage the use of real data and maps for student activities and teacher professional development to allow inquiry of place-based data.
- 12 Support regional networks of environmental professionals using Wake County Green Schools Partnership's model, including the school district, teachers, nonformal educators, and the local community.
- 13 Provide guest speakers and topic experts to schools for environmental programs, STEM events, career panels, etc. to encourage students to pursue environmental careers.
- 14 Provide mentors and support for after-school environmental programs and school environmental clubs.
- 15 Build relationships with potentially aligned groups, including parent-teacher associations or organizations, faith-based coalitions and youth groups, community groups, and civic leagues.
- 16 Provide professional development for a wide range of audiences focusing on the NC Standard Course of Study, best practices in environmental education, local environmental justice issues, environmental content knowledge, etc.
- 17 Evaluate workshops and other professional development in environmental education using the NAAEE Guidelines for the Preparation and Professional Development of Environmental Educators to ensure they are quality programs using best practices in the field.



- 18 Connect students, parents, and teachers to resources and financial aid opportunities for outdoor experiences outside the traditional school day, including track-out and summer camps, after-school programs, volunteer opportunities, and family events.
- 19 Provide teachers with resources for various environmental topics in their community, including guest speakers, demonstrations, and materials.
- 20 Provide resources, materials, training, and administrative support for teachers to use existing woods, wetlands, creeks, landscaped areas, greenspaces, and other natural areas on or near their schools for teaching across disciplines. Seek district support and professional development for how to use these resources.
- 21 Promote current professional development opportunities and help develop new training programs for educators that will meet the state's K-12 science standards and goals for environmental literacy, while also building educators' knowledge, skills, and confidence in teaching environmental education.
- 22 Support workshops and trainings that use environmental education curriculum linked to the NC K-12 Standard Course of Study, providing ready-to-use lessons and activities that will help students achieve the learning outcomes identified in our state standards across multiple subjects and grade levels.
- 23 Provide and support professional development opportunities that increase environmental literacy, especially those that provide renewal credits Professional Educator's License and NC Environmental Education Certification.



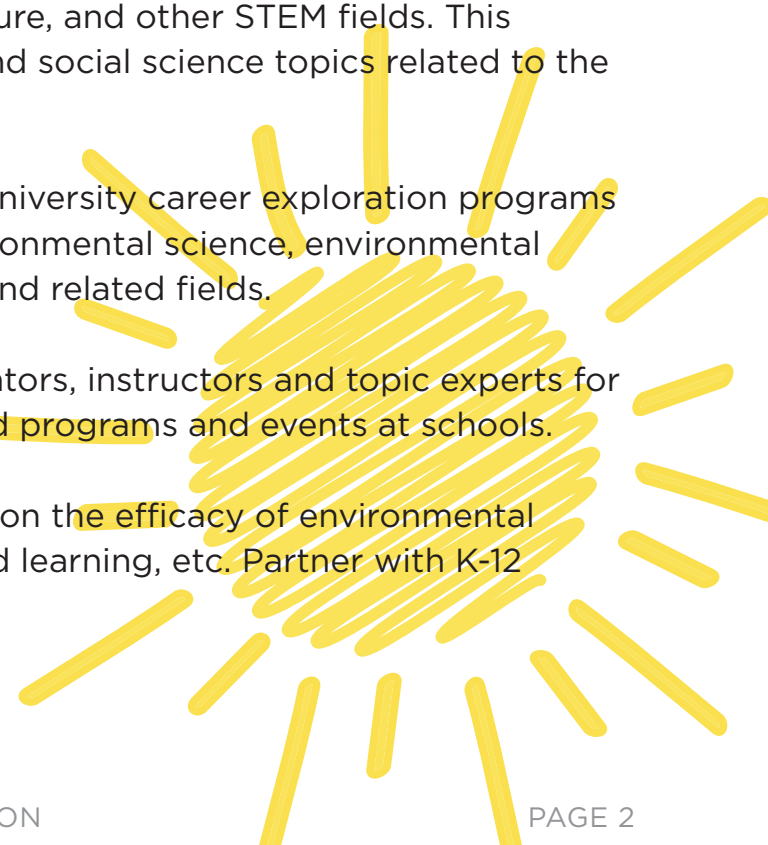
# IMPLEMENTING THE ELP: Higher Education



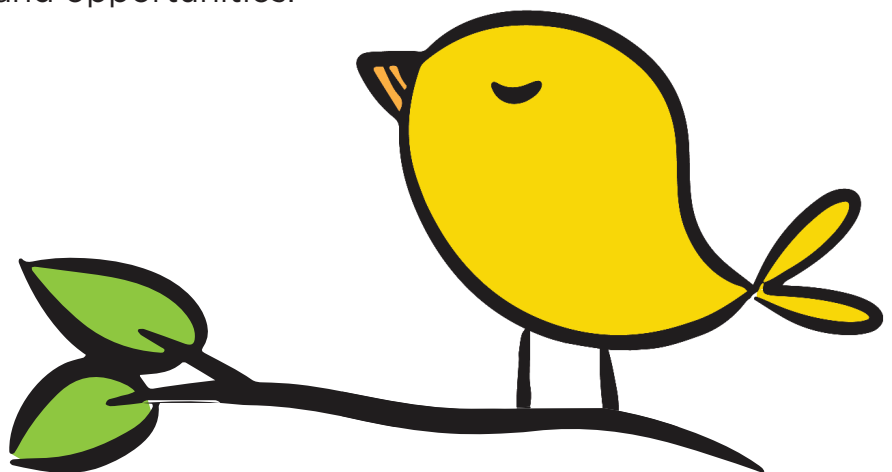


## Suggested Strategies

- 1 Support the development of high-quality, culturally responsive environmental education lessons, activities, resources and professional development for K-12 teachers that are aligned to the North Carolina Standard Course of Study.
- 2 Provide support and consultation on environmental education workshops and curricula developed by nonformal environmental education organizations and agencies. Provide evaluation tools and resources for those workshops and curricula.
- 3 Evaluate your own college and university-based workshops and other professional development for K-12 teachers using the NAAEE Guidelines for the Preparation and Professional Development of Environmental Educators to ensure they are quality programs using best practices in the field.
- 4 Provide K-12 students with camps, programs, or other on and off-campus authentic learning opportunities in areas including applied environmental science, sustainable energy, ecotourism, geosciences, biotechnology, forestry, agriculture, and other STEM fields. This could also include humanities and social science topics related to the environment.
- 5 Offer and support college and university career exploration programs for high school students in environmental science, environmental education, outdoor education, and related fields.
- 6 Provide college students as mentors, instructors and topic experts for environmental and STEM-related programs and events at schools.
- 7 Pursue and encourage research on the efficacy of environmental education, outdoor teaching and learning, etc. Partner with K-12 schools on that research.



- 8 Pursue and encourage research on the evaluation of environmental education programs, resources, materials and professional development workshops.
- 9 Share and interpret current research on environmental education and outdoor learning to teachers and nonformal educators. Share tools, training, and resources such as the Natural Learning Initiative and similar programs with teachers as well as nonformal educators and programs.
- 10 Increase connections to and cooperation with pre-service teacher education programs, nonformal educators, and environmental education workshops and programs. Incorporate environmental education concepts and standards in the pre-service education curriculum.
- 11 Develop environmental education courses within colleges or departments of education, outdoor recreation, parks and recreation, etc. Investigate the creation of environmental education minors, diploma or certificate programs in environmental education that align with the NC Environmental Education Certification Program. Consult with the NC Office of Environmental Education, the Environmental Educators of North Carolina, and other environmental education agencies and organizations on the development of the courses and programs.
- 12 Invite nonformal educators and representatives from the NC Office of Environmental Education, the Environmental Educators of North Carolina, and other environmental education agencies and organizations to speak to college students about the environmental education profession and opportunities.



# IMPLEMENTING THE ELP: Community Organizations and Conservation Groups







# Suggested Strategies



- 1 Use existing and tested environmental education curricula and activities when planning programs and NAAEE's Guidelines for Excellence in environmental education when creating new curriculum.
- 2 Support collaborations and partnerships between schools and community organizations, nonformal educators, state-level agencies, environmental education centers, institutes of higher education, and conservation organizations.
- 3 Incorporate environmental science and other STEM content into family or out-of-school programming. (e.g., do a quick lesson on erosion before a trail maintenance project with a youth group.)
- 4 Provide opportunities for students to participate in service-learning projects and internships related to the environment and environmental issues. Partner with schools and nonformal environmental education programs to engage youth.
- 5 Offer opportunities for career shadowing or volunteering for K-12 students and their families to inform and excite them about pursuing environmental careers.
- 6 Provide students with opportunities to create environmental solutions using new technologies in engineering, environmental science, sustainable energy, ecotourism, geosciences, biotechnology, forestry, agriculture, and other STEM fields.
- 7 Partner with schools to enhance and maintain school grounds, whether through grants, or volunteer coordination.





- 8 Share opportunities for funding and resources with school audiences as available. (For example, inform schools when you give away trees or host free rain barrel workshops.)
- 9 Provide opportunities for students and teachers to investigate their local environment through field experiences and citizen/community science and outreach programs that foster the development of critical thinking skills and encourage the exploration of careers in the sciences.

10 Connect teachers with citizen/community science programs so students can authentically engage in scientific research while observing phenomena in their schoolyard. Provide opportunities for students and teachers to make science-based connections to statewide and regional environmental issues, participate in real-world scientific research through citizen/community science projects, and explore environmental justice issues at both a global and local level.

11 Encourage program providers to use the NAAEE Guidelines for Excellence when developing outdoor learning experiences and resources.

12 Increase the awareness of local conservation efforts among teachers about so they may incorporate that information into their instruction.

13 Provide guest speakers and topic experts for students and teachers. Identify barriers, and work with schools and nonformal education providers to develop speaker policies.



- 14 Create partnerships with guidance school counselors, CTE teachers, science teachers, guidance counselors, and career coordinators to enhance student learning and success. Provide CTE teachers with professional development and resources in environmental science and other STEM topics related to environmental careers.
- 15 Support staff in attending workshops and training to strengthen their pedagogy practices, expand their environmental education and content knowledge, and strengthen outdoor teaching practices.
- 16 Offer training and resources to other educators in your area of expertise--whether that's conservation content knowledge, cultural responsiveness, Indigenous Traditional Ecological Knowledge, etc.

