

# AmeriCorps Environmental Education PROGRAM DEVELOPMENT TOOLKIT



**This toolkit serves as an aid to AmeriCorps members in developing and administering environmental education programs in North Carolina. It was developed through a partnership between the N.C. Office of Environmental Education and Public Affairs and AmeriCorps programs hosted by Conserving Carolina (Project Conserve) and the Conservation Trust for NC (CTNC AmeriCorps). These AmeriCorps programs are supported by grants from the NC Commission on Volunteerism and Community Service in the Office of Governor Roy Cooper.**

**The toolkit was adapted from the North American Association for Environmental Education’s Guidelines for Excellence - Nonformal Environmental Education Programs. You can access the complete Guidelines for Excellence on the association’s website at [https://cdn.naaee.org/sites/default/files/gl\\_nonformal\\_complete.pdf](https://cdn.naaee.org/sites/default/files/gl_nonformal_complete.pdf). A special thanks to NAAEE and Bora Simmons for the use of the guidelines.**

## GOAL OF ENVIRONMENTAL EDUCATION

The goal of environmental education is environmental literacy. Environmentally literate individuals understand environmental issues and how environmental quality is affected by human decisions. They use this knowledge to make informed, well-reasoned choices that also take social, economic and political considerations into account.

The following steps will help you develop and administer new and existing quality environmental education programs. Note that this is a general guide—some of the recommendations will be more applicable to your program than others. Also, it is not comprehensive, but rather this toolkit serves as a guide for getting started in environmental education programming.

## STEP 1

**Determine the environmental, educational or community needs the program will address.**



### #1 - Needs Assessment

#### **Identify Environmental Issue or Condition:**

1. Work with your site supervisor to determine the environmental issue, condition or topic the program will be designed to address. Has the need for the program received support from stakeholders such as residents, community leaders and the target audience? If not, consider hosting a community meeting to get feedback. Work with your site supervisor and/or executive director to schedule meetings with leaders in the community to gather input and to identify potential partners.

If you are working with an existing program, consider reevaluating the program to make sure that the topic is still relevant to the community. You may also want to discuss other potential program topics with members of the community and stakeholder groups.

## Inventory Existing Programs and Resources

2. Do an inventory of existing programs, materials and community resources. Your program should not duplicate existing programs but instead it should utilize existing resources and complement existing programs. Look for opportunities to partner with local organizations and existing programs. In addition to identifying partners and strengths in the community, look for gaps in community and organizational resources that may prevent successful program development. Once you identify those gaps, come up with a plan for how the program will address them.

If you are working with an existing program but haven't recently conducted an inventory of resources, this is an opportunity to communicate and network with other organizations in the community and the update your update your inventory of programs and resources.

## Analyze the Needs of Your Audience

3. Identify your program's target audience. Determine whether this audience is underserved and how. Determine how you are going to define "underserved" in your program. In addition to economic tiers and other indicators of underserved audiences, consider whether attendees have been exposed to this type of program before. For instance, is this the first time an individual from your target audience would be participating in an outdoor nature program? When conducting an analysis of your target audience(s), identify the cultural perspectives, needs and interests of your audience and determine how these will be addressed in you program and activities. Make sure your program is appropriate for the age, experience, cultural background and skills (literacy and languages spoken) of your target audience. The type of program you offer and the length of the program should be considered to meet the needs of your audience. The program should strive to be inclusive, taking into account the culture, ethnic background and gender of the audience. Be aware that some program participants may need accommodations. Be familiar with techniques for making facilities and programs accessible with ADA (Americans with Disabilities) guidelines.

If you are working with an existing program, it may be a good idea to reevaluate your target audience and determine if your program is still meeting the needs of its target audience.

## STEP 2

### Determine how the program supports the goals of the parent organization and host site.



## #2 - Organizational Needs and Capacities

### Program is Consistent with Organizational Priorities

1. Make sure your program supports and aligns with your site's mission, goals, objectives and short and long-term strategic plans as well as those of your site's broader parent/sponsoring organization. It is important to be able to explain the relationship between your program and these goals. Your program should support the communication plan for the organization and a budget for the program should be included in the site's budget. If a budget hasn't been included, work with your site supervisor to plan a program budget.

For existing programs, consider whether the program still aligns with the mission and goals of your parent organization. If the organization's mission and/or objectives have changed, this may create an opportunity to survey your parent organization's leaders to see if there are other ways your program can support their mission and communication goals.

### **Organization's Need for the Program Identified**

2. Make sure the program fills an identified need within your site's existing activities and within the parent/sponsoring organization's existing programs. Review the relationship of your program with existing programs and make sure a place for your program has been identified among all of the programs and activities offered by the site.

This can be a helpful exercise for existing programs as well. It can be an opportunity to network with others in the parent organization and identify new partnership opportunities.

### **Organization's Existing Resources Inventoried**

3. Make sure that the resources (equipment, facilities, volunteers, materials) needed for long-term success at your site have been inventoried and will be sufficient to successfully support your program. If resources have not been identified, develop a plan with your site supervisor. It is important that the leaders of the organization, including the board of directors, support the program and that staff and volunteers who will be helping with the program support its development.

For an existing program, this may be a good opportunity to evaluate your resources and to talk to staff and/or volunteers about needs they perceive aren't being met through the current level of resource support.

## **STEP 3**

### **Determine how the program will be structured and what it hopes to accomplish**



### **#3 - Program Scope and Structure**

#### **Develop Goals and Objectives for the Program**

1. Determine the goal(s) for the program. The program needs to be based on clear and relevant goals and objectives. Determine how your goals align with the AmeriCorps program and which goals you can measure. Use your goals and measures to develop your program content and not vice versa. In other words, don't put your program content together and then try to figure out your goals and how you are going to measure results. You may want to consider working with your community partners to develop your programs goals and objectives. The goals and objectives should clearly explain what the program will accomplish and they should support the goals of the AmeriCorps program.

For established programs, it is always a good idea to review your program goals and objectives and to assess whether they are actually measuring what they were intended to measure. It is not uncommon for goals and objectives to evolve over time and for measures that were once relevant to become less indicative of program goals.

\*Resources: *Nonformal Environmental Education Programs: Guidelines for Excellence*, published by the North American Association for Environmental Education  
[https://naaee.org/sites/default/files/gl\\_nonformal\\_complete.pdf](https://naaee.org/sites/default/files/gl_nonformal_complete.pdf)

Appendix A: *Writing Smart Objectives*  
Appendix B: *Using Rubrics*

2. Do your goals and objectives support the goals of environmental literacy (increasing awareness, knowledge, attitudes, skills and participation)? In determining the goal(s) of the program, consider what you are trying to achieve. Although it may be difficult to measure behavior change, you can look at precursors to environmental stewardship such as knowledge, attitudes and behaviors.

Consider asking your partners to help you develop the program's goals and objectives. Make sure your evaluation criteria and indicators of success are specified for the program and are tied to the program's goals and objectives.

When determining measures, think about what you can control. Be careful of trying to measure things you didn't influence or change and don't create benchmarks you can't reach.

### **Fit with Goals and Objectives of Environmental Education**

3. How do your goals align with the objectives of environmental education (awareness, knowledge, attitudes, skills and participation) and the overall goal of environmental literacy? Look at how your program contributes to a comprehensive local or state environmental education plan and use these plans as resources.

\*Resource: *Excellence in Environmental Education: Guidelines for Learning (K-12)*, published by the North American Association for Environmental Education  
[https://cdn.naaee.org/sites/default/files/learnerguidelines\\_new.pdf](https://cdn.naaee.org/sites/default/files/learnerguidelines_new.pdf)

\*Resource: The *N.C. Environmental Education Plan's* goals and objectives can be used or adapted to fit your program's needs.  
[http://www.eenorthcarolina.org/Documents/ee\\_plan\\_web\\_print.pdf](http://www.eenorthcarolina.org/Documents/ee_plan_web_print.pdf)

### **Program Format and Delivery**

4. Determine your outreach methods and how you can best reach your target audiences. Determine your program's format (e.g., will it include workshops, an "in-ground" demonstration project, community forums, camps, festivals, courses, and/or guest speakers) and whether it is appropriate to meet your goals and objectives. Consider how your environmental education program will integrate into your host organization's programs, as well as other similar programs in the area, if they exist. Consider your program's scope, duration, format and delivery methods and whether it is appropriate to meet your goals and objectives and the needs of your audience. The format and delivery of your program and its elements should be designed to provide a "safe" and comfortable atmosphere for audience members of all races, genders, ages or cultures.

If you are working with an existing program, this may be an opportunity to re-evaluate your program format and outreach methods. Look at whether there are other formats that may expand the reach of your program. Look at how you are doing outreach to your audience and determine if the methods you are currently using have become outdated and whether

there may be better ways to reach your target audience. If you are not using social media to promote your programs, this may be an opportunity to expand your reach.

\*Resource: *Nonformal Environmental Education Programs: Guidelines for Excellence*, published by the North American Association for Environmental Education  
[https://naaee.org/sites/default/files/gl\\_nonformal\\_complete.pdf](https://naaee.org/sites/default/files/gl_nonformal_complete.pdf)

Appendix C: *Working with Adult Learners*

Appendix D: *What you Need to Know about Children Under Six*

## Partnerships and Collaboration

5. Where applicable, partner with groups who have similar interests and shared goals. Include partners in the program development process. In consultation with your site supervisor, form a team of partners and staff to provide advice on program development. For an existing program, it is always good to look at new possible partners and opportunities.

## STEP 4

### Determine if you or other staff are prepared to give the program.



## #4 - Program Delivery Resources

### Assessment of Resource Needs

1. Make sure you have the resources (volunteers, materials and facilities) needed to develop and conduct the program. Identify needed resources at your site and those available from partners.

### Quality Instructional Staff

2. When working with volunteers, provide training beyond subject matter and technique to include safety and emergency preparedness, behavior management and the need for objectivity and balance. If needed, develop a training program for volunteers.

\*Resource: *Professional Development of Environmental Educators: Guidelines for Excellence* published by the North American Association for Environmental Education  
[https://cdn.naaee.org/sites/default/files/professional\\_development\\_of\\_environmental\\_educators\\_-\\_guidelines\\_for\\_excellence\\_2017.pdf](https://cdn.naaee.org/sites/default/files/professional_development_of_environmental_educators_-_guidelines_for_excellence_2017.pdf)

### Facilities Management

3. Make sure safe and appropriate facilities are available for the program. Facilities and areas have been surveyed for health or safety hazards.

### Provision of Support Materials

4. Make sure you have adequate supplies and resources during the program including food, drinks and lodging and that financial arrangements for any fees have been made. Test any equipment being used before the program and make sure volunteers have been trained to use it.

## Emergency Planning

5. Make sure you plan for emergencies. Have appropriate staff and volunteers trained in first aid and CPR. Know who to contact for medical assistance in case of an emergency such as a fire. Have the contact numbers readily available (programmed into cell phones) and know how to access the nearest phone or radio if needed. Be able to recognize poisonous plants and venomous animals and how to avoid them. A system should be in place in case of severe weather and make sure staff/volunteers know where to go for shelter and/or how to evacuate. When advertising the program, provide participants with relevant information about the program including level of physical activity, appropriate clothing, equipment needed and safety concerns.

## STEP 5

### Use instructional materials that are educationally sound and developmentally appropriate



#### #5 - Program Quality and Appropriateness

##### Quality Instructional Materials and Techniques

1. If possible, it's always a best practice to use existing curriculum or to modify existing curriculum for your program needs. Using established curriculum can assure you are using quality materials that have been extensively reviewed by experts in education and the subject matter and are pedagogically sound, unbiased and scientifically accurate. Make sure to check that the curriculum you are using has been through a review process. It is always helpful when providing a program for teachers and school-aged children to correlate the program with North Carolina's Standard Course of Study. Make sure your program and materials are culturally and gender sensitive and inclusive, and are age, audience and content appropriate. The program should be safe and comfortable for the audience and activities should be accessible and follow ADA standards. If creating new curriculum, activities or materials, work with your site supervisor and the AmeriCorps program director to have your program's content reviewed by experts in education and the subject matter and by members of the target audience to assure that your materials are pedagogically sound, unbiased and scientifically accurate. You may want to enlist the help of some teachers in the local community to help you correlate your program to curriculum standards.

\*Resource: *Environmental Education Materials: Guidelines for Excellence* published by the North American Association for Environmental Education  
[https://cdn.naaee.org/sites/default/files/gl\\_ee\\_materials\\_complete.pdf](https://cdn.naaee.org/sites/default/files/gl_ee_materials_complete.pdf)

\*Resource: Department of Public Instruction's K-12 Standards and Curriculum:  
<http://www.dpi.state.nc.us/curriculum>

\*Resource: Department of Public Instruction's Science Wiki  
<http://scnces.ncdpi.wikispaces.net/>

\*Resource: For existing programs and resources, visit [eenorthcarolina.org](http://www.eenorthcarolina.org) and <http://www.eenorthcarolina.org/certification--elective-criteria1-workshops.html>

## Field Testing

2. You may not have time to field test activities and materials. If you are using existing curriculum, the guide should indicate whether the parent organization initially did field testing. If you are developing a new program, at a minimum, it would be good to have a few members of your target audience field test the activities.

## Promotion, Marketing, and Dissemination

3. Promote your program to make sure that the program reaches your target audience. Make the availability of the program known to target audiences in the local community and make sure they know how they can participate and where to get more information. Use media contacts when possible. Coordinate events with partners when possible so they don't compete with other programs and so your partners can help you promote your program. When possible, coordinate your program with other environmental education programs or events to maximize resources. Obtain photo releases from program participants so you can use photos to promote the program to the target audience and to your site host, its board of directors and to your program partners. Photographs and testimonials from participants will help you increase support for your program and it will help the AmeriCorps program director better promote the AmeriCorps program.

## Sustainability of Program

4. Develop your program with long-term sustainability in mind. Make sure your goals and objectives are appropriate for a long-term program. Work with your site supervisor to develop a long-term funding strategy. Include partnerships and other "ownership" possibilities in the strategy for long-term sustainability. Keep detailed and accurate records of programs, goals, objectives, content, participants, training resources and evaluation results. This information can be used to write grants, to seek additional funding support and for overall program support from the host site and community partners.

## STEP 6

### Develop an evaluation strategy, evaluate the program and use results



#### #6 - Evaluation

### Determine Evaluation Strategies

1. Evaluation techniques are determined while designing the program's goals and objectives. The evaluation techniques and measures you select should drive the program's development. Create the program around the results you would like to measure and make sure the assessment techniques and tools are considered early in the planning stage. Make sure the type of program outputs, outcomes and impacts (e.g., short-term, medium-range, and long-term) are appropriate for your program goals, objectives and length. Your program should always have a clear purpose that you can evaluate. You may want to include evaluation of the facilitator in your program evaluation. You can evaluate the facilitator, the audience and/or the program. Evaluations can be conducted at different times—before the program, during the program (formative) and after the

program (summative). The evaluation should include a measure of the overall impact of the program and should document numbers served. When reporting, indicate the number of attendees that said it was their first time participating in a program of that kind (25% of attendees said it was their first time doing xyz).

\*Resource: *Nonformal Environmental Education Programs: Guidelines for Excellence* published by the North American Association for Environmental Education  
[https://cdn.naaee.org/sites/default/files/gl\\_nonformal\\_complete.pdf](https://cdn.naaee.org/sites/default/files/gl_nonformal_complete.pdf)

Appendix E: *Logic Models as a Tool for Program Development and Evaluation*

## Effective Evaluation Techniques and Criteria

2. The results of your program evaluation should tell you whether your program increased environmental awareness (literacy), met your goals and objectives, and used resources such as funds and supplies effectively. The evaluation should tell you if the program addressed identified needs and it should include ways to capture unanticipated outcomes both positive and negative.

## Use of Evaluation Results

3. Program evaluation and use of the data from the evaluation are a critical part of program development. Review evaluation results to determine whether the needs of the participants, site host, partners, audience, sponsors and funders have been met. Use results to identify the program's strengths and weaknesses and to identify how the program impacted the community. Share the results with external groups to promote the program within the community, to increase understanding of the host site's work, to seek funding, to build visibility in the community, and to recruit other participants and volunteers.
4. Share evaluation results with the site supervisor and program director. In addition, it is important to share your results with the larger environmental education community so that successes, problems and unintended consequences can be used as learning tools by others. Presentations at conference such as EENC's (Environmental Educators of North Carolina) annual conference are a good way to share your program results and to learn from others' experiences.

## Tips for Program Evaluation:

Programs vary greatly in terms of scope and complexity. It is important to narrow how you are defining your program and to use a consistent measure.

For larger audiences, keep it simple. For example, use three questions and do this simple assessment. Use yellow and blue index cards. Hand out yellow cards and have participants put something in the right corner of the card like their birthdate or a picture or shape—make it fun. Have them answer three basic questions about the topic of your program. For example, a program at an aquarium could ask participants to write down their answers to the following questions on the yellow card:

1. What you think is most important about our oceans?
2. Why are clean oceans important?
3. What can you do to protect the oceans?

Collect the cards up and conduct your program. At the end of the program, hand out the blue cards and tell them to put the same date, picture or shape in the right corner of the card. Ask the three questions again. When reviewing the program, look at the change, if any, in answers and calculate quantitative results. For example, 30% of participants understood the basic content of the program.

Assess three areas:

1. Knowledge - Understanding of the basic content (the basic facts and information)
2. Attitude - Why do you think it is important?
3. Behavioral - What can you do to protect the oceans?

**Another idea:** Use a flip chart and sticky dots. Prepare questions and answers when participants arrive and have them use the sticky dots to answer the questions (pre- and post-tests). You can do the pre and post-test randomly for 4 or 5 weeks.

Use “dipsticking” during your program to check for participants’ understanding and to see if more instruction is needed. You can do this by asking questions throughout the lesson to the whole class/group. By asking the participants questions throughout the activity, you can gauge the effectiveness of the program.

\*Resources:

*Conducting Meaningful Interpretation: A Field Guide for Success* by Wilkinson and Ward

*Evaluating Your Environmental Education Programs: A Workbook for Practitioners* by Julie A. Ernst, Martha C. Monroe, and Bora Simmons

*Practical Evaluation Guide: Tools for Museums and Other Informal Education Settings* by Judy Diamond

*Authentic Assessment: A Handbook for Educators* by Diane Hart

## Helpful Training Workshops:

### **Certified Interpretive Guide Training**

[http://www.interpnet.com/NAI/nai/CertPortal/See\\_Whos\\_Certified/Certified\\_Interpretive\\_Trainers.aspx](http://www.interpnet.com/NAI/nai/CertPortal/See_Whos_Certified/Certified_Interpretive_Trainers.aspx)

Covers topics such as the principles of interpretation, knowing your audience, program development and program delivery.

### **Methods of Teaching Environmental Education**

<http://www.eenorthcarolina.org/certification--requirements.html#Criteria>

Covers teaching methods, creating the learning environment, teachable moments and inquiry, developmentally appropriate education, assessment and correlations to N.C.’s Standard Course of Study.

# Program Development Toolkit Checklist



## Step 1 – Needs Assessment

- List the environmental topic(s), issue or condition your program will be designed to address.
- List your program’s stakeholders (residents, community leaders, target audience).
- List existing programs, materials and community resources that you identified during your inventory.
- List your current and potential program partners.
- List any gaps or perceived disconnects between your host organization’s resources and the program’s resource needs.
- Who is your target audience?



## Step 2 – Organizational Needs and Capacities

- Explain how your program aligns with the mission, goals and objectives of your site and parent organization.
- Outline your program budget.
- Explain how your program fills a need in the community your organization serves.
- What existing resources (equipment, facilities, volunteers, materials) have you identified?



## Step 3 – Program Scope and Structure

- What are your goals and objectives for the program?
- Explain how your program goals support environmental literacy.
- What is your program’s format and scope?
- What outreach methods will you be using to reach your audience?
- Which program partners provided input on program development?



## Step 4 – Program Delivery Resources



What resources have you identified (volunteers, materials, facilities, etc.) to develop and give the program?



How many volunteers and/or staff have been trained to deliver a safe and balanced program?



Explain how you assessed your facilities for health and safety.



Explain how emergency planning was included in training.



## Step 5 – Program Quality and Appropriateness



Describe how your curriculum/program is pedagogically sound, unbiased and scientifically accurate.



Has your program been correlated to North Carolina’s Standard Course of Study (if program is for school-age children)? Which essential science standards does your program meet?



Describe how you field tested your program/curriculum.



Describe the media and community resources you are using to promote the program to your target audience.



Have you developed a long-term plan for the program with your site supervisor?



## Step 6 – Evaluation



Which evaluation methods and measures did you use to develop the program?



Describe your evaluation tools and program measures.



What were the overall results of your evaluation? How did you use the results to assess your program?



Describe how you shared the results of the evaluation with your site supervisor, program director and the larger education community.

