



*SUSTAINABLE
ENVIRONMENT
for QUALITY of LIFE*



EDUCATION WORKSHOPS

What is it?

Environmental education increases public awareness and knowledge about environmental issues or problems. Programs can take the form of training, workshops, displays and learning experiences. According to the EPA, environmental education provides the public with the necessary skills to make informed decisions and take responsible action. It teaches individuals how to weigh various sides of an issue through critical thinking, problem-solving and decision-making skills.

Costs

Costs are minimal and primarily involve the allocation of time. Many of the educational resources are provided at no charge by the US Environmental Protection Agency at <http://www.epa.gov/epahome/educational.htm>.

Some of the hands-on activities require lab equipment and common chemicals.



This Action Item can be implemented as a

- POLICY
- ORDINANCE
- PROGRAM

Shared Impact and Benefits

- Education workshops offer teachers a well-developed curricula with air quality and other environmental materials to teach students from kindergarten through high school about air quality and other environmental concerns.
- Topics covered include: air quality, rainforests, radon, the creation of environmental laws, the greenhouse effect, and ozone. Other programs cover water quality, stormwater and biodiversity issues.
- Programs such as the air quality program encourage all students to think more critically and creatively about air pollution problems and the alternatives for resolving them.
- Allow students to integrate environmental education with the rest of the science curriculum— environmental examples make biology and chemistry very “real” to students.
- Education is the basis of all informed action. Education programs, whether more academic or action-oriented, equip adults and kids to take environmental actions.
- Increased environmental education, especially programs that focus on multiple media and impacts, work to create an awareness of the inter-relatedness of the natural and built environments. Such awareness can help to head off unintended consequences of policy decisions/actions.
- Educational programs for children are a great entrée to educating adults. The materials, information and changed behavior children bring home influences parental behavior.

Tracking Progress

Let Centralina Council of Governments know when you've implemented this action by contacting Carol Lewis at 704-348-2730 or clewis@centralina.org.

The Bottom Line

Environmental education programs are available for all ages and education levels. Environmental education encourages public involvement in local decisions by providing the skills needed to make informed decisions. It is the basis for implementing all kinds of actions to improve or protect the environment

Interested? Read on!



Basic Information

- Americans strongly support environmental education in the schools. According to a survey conducted by the National Environmental Education and Training Foundation and Roper Starch Worldwide (Nov.1997)
- Environmental knowledge affects beliefs and attitudes about the environment.
- Environmental education encompasses a variety of activities whose goal is to translate awareness into responsible action.
- The S.C. Department of Health and Environmental Control (DHEC) offers many environmental education programs for teachers and students. All programs are free and contain a wealth of information. Information on the programs is available at <http://www.scdhec.gov/eqc/outreach/html/programs.html>.
- The NC Office of Environmental Education promotes environmental education throughout North Carolina. The projects, programs, and publications help inform the general public, teachers, businesses, and other state organizations about their environment, environmental issues in their region, and how they can get involved in the solutions. This is done through many avenues including monthly electronic newsletters, support of EE centers, free educational materials, library workshops, information on university and community college EE-related programs, and much more. As a guardian of the North Carolina Environmental Education Plan, the Office looks to that plan's fourteen objectives to guide its efforts.
- The North Carolina Department of Environment and Natural Resources offers workshops, web links, and other useful information at their website: <http://www.ee.enr.state.nc.us/>.
- The Office of Environmental Education manages the North Carolina EE Certification Program as a way to enhance capacity-building in environmental education across the state.
- The US Environmental Protection Agency offers a continuum of programs and resources to educators and the public through its website at <http://www.epa.gov/epahome/educational.htm>.
- The EPA offers a free workshop for teachers that uses environmental health to teach across disciplines.
- For groups, high school students, and interested individuals, EPA offers a High School Environmental Center at <http://www.epa.gov/highschool/>.
- The EPA Student Center (<http://www.epa.gov>), targeted to younger children, is an exciting portal to information about every aspect of the environment.
- Curriculum Resources are available for air, ecosystems, conservation, waste & recycling human health and water. Check out www.epa.gov/teachers/curriculum-index.htm. Background, lesson plans, and hands-on activities are featured.
- Information for adults and students can be ordered from EPA at www.epa.gov/teachers/order-publications.htm. This website also contains information and programs that can be downloaded.
- Intermediate grade students explore ozone as they discover what produces this air pollutant. Students will also gain Web browsing skills in this interactive and fun program.
- In EPA's air program, Grades 6-12 sponsor classroom and school-wide activities that raise children's awareness of stratospheric ozone depletion, UV radiation, and simple sun safety practices. For grades K-8, the SunWise Toolkit is free to registered schools.
- The handouts provide information about energy, environmental stewardship, natural resources, pollution prevention .





FAQ's

Q: Do I have to be part of a school system to use the educational resources?

A: No, everyone can participate. Find the resources that are right for you or your group by starting with the websites referenced here. You'll find additional resources listed on each of the links.

Q: How can I promote environmental education?

A: EPA suggests that you follow four major steps:

Educate yourself about the environment.

- Search the World Wide Web (WWW) for environmental education information and resource materials
- Get copies of environmental education publications from EPA and state and local agencies and organizations in your state
- Obtain environmental education materials that have been highly rated using the fields guidelines or conduct your own evaluation using these guidelines
- Contact teachers, education officials, nonprofit organizations, state agencies, and others find out what environmental education efforts are already underway in your community
- Participate in environmental education professional development opportunities (e.g., teacher education workshops)
- Visit local museums, parks, nature centers, zoos, aquariums, and botanical gardens for exhibits, lectures, or special events focused on environmental issues
- Enroll in classes that teach about the environment
- Find out about local environmental issues by participating in community meetings and events
- Join a national or state environmental education professional association and attend their conferences

Teach about the environment in your schools or community.

- Work with teachers, school officials, community organizations, state agencies, and others to help you design an environmental education course or program in your school or community
- Invite local university professors and researchers to visit your classroom to talk about local and global environmental issues
- Look for award programs and contests that will engage your students in learning about the environment
- Search for grants and other funding opportunities from state and federal agencies,

foundations, and private companies to support your teaching efforts

Use environmental education to improve education.

- Tie classroom learning to real-life experiences about local or other broader environmental issues
- Use investigative, hands-on/minds-on, student-centered, and cooperative learning instructional methods that actively engage the learner in local environmental issues
- Use a local or broader environmental issue to develop the learner's critical thinking, problem solving, and effective decision-making skills
- Develop or adapt an interdisciplinary curriculum which uses the environment as an integrating context for teaching across all subject areas (e.g., science, language arts, and the social sciences)
- Use environmental education to meet national and state standards (e.g., in math, science, and social studies) which emphasize inquiry and assessment
- Use environmental education materials that are consistent with the field's environmental education guidelines and correlate these materials to your state's or school district's academic stan-





FAQ's (Continued from Page 3)

Let others know about the benefits of environmental education.

- Invite other educators and education decision-makers into your classroom or community to share information and resource materials
- Make presentations to your school departments or at faculty meetings, "back-to school" nights, and school fairs
- Look for award programs and contests that enable you to communicate the successes of your program to others
- Introduce environmental education to your professional education association or support its existing efforts by writing an article for their newsletter or giving a presentation at their conferences

Q: Is environmental education just for kids?

A: There are many resources, websites, and publications that promote environmental education, projects, and programs. There is truly something for everyone from youngsters to senior citizens.

It is up to everyone to be aware of and knowledgeable about the world we live in, be informed about environmental issues in their area, and have the skills needed to get involved.

Q: Can I get continuing education credit for participating in a teacher workshop?

A: Yes, the EPA offers CEE credits that are accepted in North and South Carolina. Both North and South Carolina offer environmental accreditation. Check the websites cited in this publication.

Who needs to be involved in implementation?

- School system science coordinators and teachers
- Environmental educators
- Representatives of environmental groups
- State and federal resource people and agencies
- The public
- If needed, State Department of Public Instruction representatives

Resources

Environmental Education World Wide Web Sites

- **EE-Link** contains EE information and resources and links to other EE sites—<http://eelink.net>
- **EdGateway** provides information and promotes discussions on math, science, and ties between environmental education and education reform <http://www.edgateway.net>
- **EPA's Office of Environmental Education (OEE)** web site provides information about EPA's EE programs (<http://www.epa.gov/enviroed>); the EPA web site contains additional educational pages for kids, students, and teachers <http://www.epa.gov>
- The **ERIC Clearinghouse on Science, Math, and Environmental Education** web site provides summary information on resources in their clearinghouse <http://www.ericse.org/>

EPA Environmental Education Publications

- EPA's Office of Environmental Education has a list of some EE publications which are free to the public. Obtain the list by contacting OEE at (202) 260-4965 or visiting OEE's web site at <http://www.epa.gov/enviroed>. Many of these EE publications can be obtained by contacting the National Center for Environmental Publications and Information at (800) 490-9198 or ordering on line at <http://www.epa.gov/ncepihom/orderpub.html>

Environmental Education Guidelines

- The **North American Association for Environmental Education (NAAEE)** is developing EE guidelines for educational materials, learner outcomes for grades K- 12, and educator preparation. Also, they have published "EE Collection: A Review of Resources for Educators, Volumes 1, 2, and 3" which apply the materials guidelines to widely available EE materials. A companion volume titled "The Biodiversity Collection: A Review of Resources for Educators" has been produced by the World Wildlife Fund (WWF), in association with NAAEE, to highlight exemplary educational materials that focus on biodiversity and related issues. Visit the NAAEE, EPA OEE, and WWF web sites for information on the guidelines and how to obtain copies of various publications <http://www.naaee.org>, <http://www.epa.gov/enviroed>, and <http://wwfus.org>. Program information, contact Carolyn Cleveland, 202-884-8821 or cleveland@aed.org



- The **National Association for Interpretation (NAI)** is an association of professional interpreters. NAI includes an Environmental Education Section. Contact NAI at (970) 484-8283 or <http://www.interpretnet.org>
- **Project Learning Tree, Project WET, and Project WILD** have developed correlations between their EE materials and some national and state academic standards. Contact Tess Erb, Project Learning Tree, (202) 463-2457, elizabeth_erb@plt.org or <http://www.plt.org>; Sandra DeYounge, Project WET, (406) 994-1913, rwwsr@montana.edu, or <http://www.montana.edu:80/wwwwet/>; and Gwyn Rowland Rozzelle, Project WILD, (301) 527-8900, natpwild@igc.apc.org, or <http://www.projectwild.org>

Conservation and Other Organizations

- National conservation organizations, such as the **World Wildlife Fund, National Audubon Society, World Resources Institute, Nature Conservancy, National Wildlife Federation (NWF)**, and others, have information and programs on various environmental issues, training opportunities, and educational materials. NWF's Conservation Directory is a useful resource for getting information about these and other conservation organizations (800-477-5560).
- The **Association of Zoos and Aquariums (AZA)** has a listing of more than 180 accredited institutions that offer programs and materials on environmental topics. Contact AZA at (301) 907-7777 or a zoo or aquarium in your community.

Funding Opportunities

- **EPA's Office of Environmental Education** provides grants to support EE programs. Contact Diane Berger, (202) 260-8619 (phone), berger.diane@epa.gov (E-mail), or <http://www.epa.gov/enviroed>
- The **National Environmental Education and Training Foundation (NEETF)** provides challenge grants to support EE projects. Contact Michelle Harvey at (202) 628-8200, harvey@neetf.org, or <http://www.neetf.org>
- **Resources for Global Sustainability, Inc.** publishes an annual "Directory of Environmental Grantmaking Foundations" which contains information on private foundations that fund environmental projects (800-724-1857).
- Some **state natural resource and education** agencies offer grants for environmental education projects. Contact your state agency for more information.

Professional Development Opportunities

- The **Environmental Education and Training Partnership (EETAP)**, funded by EPA, is a consortium of nearly a dozen organizations and universities that delivers EE training to education professionals across the country. EETAP is managed by NAAEE and includes partners such as Project Learning Tree, Project WILD, and Project WET. Contact EETAP, (202) 884-8828, questions@eetap.org, or <http://eetap.org>

Environmental Education Programs at the State Level

- The **National Environmental Education Advancement Project (NEEAP)** supports the development of EE strategic plans and comprehensive programs in 26 states. Contact Abby Ruskey (715) 346-4179, aruskey@uwsp.edu, or <http://www.neeap.uwsp.edu>
- The **State Education and Environment Roundtable (SEER)** supports state department of education EE efforts in 12 states, especially schools that use the environment to integrate its curriculum. Contact Dr. Gerald Lieberman, (619) 676-0272, gerald@seer.org, or <http://www.seer.org>

National and State Environmental Education Associations

- **NAAEE** is an association of professional environmental educators. For membership information, contact Janet Thoreen, (937) 676-2514, jthoreen@erinet.com, or <http://naaee.org>. In addition, NAAEE has a **State Affiliates Program** which is a network of 54 state and Provincial EE associations across the U.S. and Canada. This program can assist you in locating an EE contact in your state.





Experiential learning is a great way to introduce environmental concepts. "Try and Drive" programs introduce alternative fuels, alternative fuel vehicles and provide a venue for talking about emissions reduction strategies.



10 Things KIDS Can Do

To Help the Environment



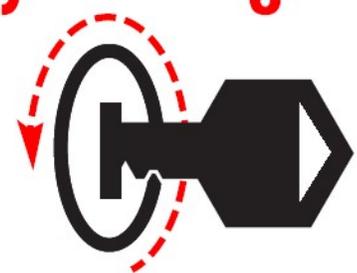
1. Bike or walk whenever possible
2. Recycle
3. Turn off lights when not in use
4. Don't Litter
5. Take a shower instead of a bath to conserve water

6. Plant a tree

7. Create a wildlife habitat by building a birdhouse for your yard
8. Turn off electronics when not in use
9. Turn the water off while you brush your TEETH
10. Ride the school bus to school

Bookmarks—developed for use in Clear the Air for Kids programs in the region's school districts.

Turn off your engine



KIDS BREATHE HERE

Why is idling of vehicles a problem?

- Vehicle exhaust is hazardous to human health, especially children. Studies have linked pollution from vehicles to increased rates of cancer, heart and lung disease, asthma and allergies.
- Idling wastes resources and damages the environment. Burning fuel needlessly costs you money and contributes to air pollution problems.

Encourage idle reduction of school buses.
Turn off your car when waiting for your children in the carpool lines.
Stop using the drive thru.

For additional information on the "Clear the Air for Kids!" campaign—www.seql.org or call 704-348-2730.

The card pictured to the left has been distributed to all elementary school parents in the region through the Clear the Air for Kids! campaign. Signage was also provided to all schools in the region as a part of this campaign.