

Environmental Education As a Teaching Tool

When educators hear the term environmental education, a number of images pop into their minds. These images could be of children planting seeds to grow flowers for Mother’s Day, testing stream water for pollutants, or cleaning up an illegal dumpsite on school grounds. The range of educational activities that utilize our natural environment is wide and often overwhelming. Bringing the natural world into the classroom is a challenge because of the wide variety of options. It can also be intimidating because of the knowledge base that many educators feel is necessary. These obstacles are easily overcome with a little bit of knowledge and desire.

Taking up the challenge could benefit a learning environment on many levels. All age children gain a connection with the natural world in which they live through environmental education. This connection enhances not only children’s knowledge of the natural world but also empowers them to take a responsible role in the future. Preschool age children are prime examples. When a young child builds a foundation which respects the earth, the future is opened for more learning and stewardship.

by Anna Kelly

Anna Kelly is the education program manager with Keep Cincinnati Beautiful in Cincinnati, Ohio. She administers an education program that provides resources and direct programming to Cincinnati schools. Environmental education is her second career path with her background being in elementary education. Anna taught grades six through eight for eight years in the Archdiocese of Cincinnati where she developed a passion for environmental education.



The use of the environment as a teaching and learning tool is valuable through all grade levels but is truly valuable in after-school settings. Many environmental educators believe this is true because the children in after-school programs are not only being taught about the environment, but environmental education is being modeled. Because they are not in a traditional school setting, they see the topic as one which is *real life* and can be acted on.

Environmental education can happen on many levels, and educators are often confused about the rationale behind it. The discipline is broad and may be seen as an extraneous element of the curriculum. Many educators have embraced teaching about the environment, but it is often in the science area. National and state organizations advocating the use of environmental education have or are in the process of creating documentation to help standardize guidelines for its inclusion across the curriculum, and throughout society.

In 1990, the President signed the National Environmental Education Act. This Congressional mandate empowered the U.S. Environmental Protection Agency to strengthen and expand environmental education as an integral part of its mission to protect the environment. The Environmental Protection Agency then provided guidance and funding to state level agencies in order to assess the status of environmental education and proceed with further expansion. Environmental education, according to the EPA, encompasses all levels of society and is a necessity to ensure a healthy, sustainable future.

Other notable organizations have also created guidelines for the use of environmental education in schools. The North American Association for Environmental Education and comparable state level agencies have created model curriculums which advocate integrating environmental education into all disciplines. These organizations strive to guide educators toward using

environmental education as a means for meeting the standards already set by traditional disciplines.

The environmental education advocates have set guidelines but the most vital step is that teachers and administrators must make the decision to incorporate the fundamental principles of it into the school setting. The environmental education topic the teacher chooses is secondary to the dedication to the principle behind the choice. Once the choice has been made, the teacher should proceed with enthusiasm and utilize all the resources at his/her fingertips.

Environmental education is an educational topic that often brings the community into the school setting. This is often the case because the school may lack facilities or the educator may lack expertise or curriculum support. Whatever the reason, children will benefit from a dedicated teacher who knows when to go beyond the school setting to develop a truly meaningful environmental education experience.

That brings me to my organization's role in environmental education. I am the education program manager with Keep Cincinnati Beautiful in Cincinnati, Ohio. We are a non-profit organization working toward voluntary recycling, litter prevention, and community beautification through education and community involvement. As an affiliate of Keep America Beautiful, we have been working toward a better local environment for 20 years. Our organization provides the support schools, communities, and other educational organizations need to lead children and adults toward environmentally responsible habits.

Over 500 educators each year come to us for support, expertise, and resources. We have programs in place that touch students directly, such as outreach presentations and field trips, as well as those which aid the teachers in their instruction. Workshops are offered which train educators in activities on the topics of litter prevention, waste reduction, and recycling. These are but a few of our programs that strive to aid local educators to integrate certain topics of environmental education into the schools of Cincinnati. Through activities such as these, over 90,000 youth in Cincinnati have been a part of environmental education on various levels with the help of our organization.

The positive response of educators has challenged us at Keep Cincinnati Beautiful to continue to expand our programs. Each year, educators anticipate our programming and integrate it into their plans. Administrators comment on the value of our programs and applaud Keep Cincinnati Beautiful's consistent message and quality. Our programs have been welcomed for their

Litter Prevention Outreach

Keep Cincinnati Beautiful has several different classroom presentations on all grade levels. All of these programs are presented by an education specialist and typically last one class period. Teachers are encouraged to organize action projects to follow up our programs. These projects range from playground clean-ups to planting gardens to beautify the school grounds and thus deter litter.

Sample Classroom Presentation

The Wartville Wizard Grades PreK – 3

This program utilizes the children's literature book, *The Wartville Wizard*, to introduce the causes and effects of litter. In the story the citizens of Wartville have the bad habit of littering. The wizard of Wartville is tired of the mess and puts a spell on the people. The litter then sticks to the person who litters. The spell is removed once the people realize their habit is bad and promise not to litter anymore.

Without any introduction, the presenter either reads or paraphrases the book depending on the age of the group. The book is then followed up with a game and discussion to reinforce the causes, effects, and solutions of litter. During the game the children are given litter which they stick to blown up cut outs of the characters. While they come up one at a time to stick on their litter, they give a possible cause of the litter and a way the litter could be avoided. The game and discussion are age appropriate and allow students to brainstorm how they can be a part of the solution.

Madden, D. (1986). *The Wartville wizard*. New York: Macmillan Publishing Company.

quality but have remained viable because of their alignment with the state of Ohio proficiency objectives for science. The goal of many environmental education organizations including Keep Cincinnati Beautiful is to work within the system to best educate the adults of tomorrow. Because of the successes of our organization and others like us in Cincinnati, environmental education is becoming a good tool which educators can use to build a strong program.

The resources available to teachers in the area of environmental education in Cincinnati are vast. Over 25 notable organizations provide programming to schools. This is often the case in major cities across the country. Resources for educators to draw upon come from various sources such as zoos,

park boards, state departments of natural resources, solid waste companies, and local non-profit organizations. For programming on solid waste topics such as recycling, waste reduction, litter, and composting, a good resource is a Keep America Beautiful affiliate in your region. Many affiliates offer programming to schools which includes outreach presentations, field trips, and contests. Another source of information and/or programs is the government body that oversees issues such as garbage collection, waste reduction, or litter problems. This could be a county or city office that focuses its attention on educating the public about waste disposal. Sanitation divisions and solid waste districts/authorities may also provide valuable resources and programs for solid waste education. Locating the agencies is the first step; but once an educator begins the process, it will be clear that there are people and organizations to help.

Environmental education has been a visible part of our educational system since the 1970s; however, we are now at a turning point. Moving into the next century with environmental education as an integrated part of the educational experience of our children is a goal all educators should embrace to help ensure the development of well informed future decision makers. Keep Cincinnati Beautiful and thousands of others have taken this challenge and are there to help you.

► **References**

Alliance for the Environment, et al. (1998). *Ohio EE 2000: A strategic plan for environmental education in Ohio*. Draft. Environmental Education Council of Ohio.

Leiberman, G. A., & Hoody, L. L. (1998). *Closing the achievement gap: Using the environment as an integrating context for learning*. State Education and Environment Roundtable.

National Environmental Education Advisory Council (December 1996). *Report assessing environmental education in the United States and the implementation of the National Environmental Education Act of 1990*. U.S. Environmental Protection Agency.

Creating a Classroom Worm Bin

Vermicomposting (worm bin composting) has become a popular way to recycle kitchen waste. Worm bins can be kept inside, do not need much material, and do not create odors if maintained properly. In three or four months, the finished vermicompost can be used to start seeds, transplant seedlings, or use around trees and shrubs as fertilizer.

Materials

- 10 gallon plastic container with lid
(must be ventilated with holes over entire bin)
- 1 pound red worms – approximately 500
(can be purchased from bait or pet stores)
- Leaves or shredded paper (with soy based ink)
- Spray bottle with dechlorinated water
- 2 cups of soil (not potting soil)
- 2 cups of food waste
- Tray to place underneath container

Assembly

Place leaves/paper into container. Mix in the soil, food waste, and worms. Spray the mixture with water through the mixing process. The mixture should be as damp as a wrung out sponge but not dripping. Place the container on the tray propped up a few inches to allow drainage. Place the bin out of direct sunlight in a location that is consistently room temperature.

Tips for Maintaining the Bin

1. Replenish food waste and bedding when they have been noticeably reduced.
2. Do not put meat, cheese, or anything with oils on it into the bin.
3. When replenishing food waste, it should be broken into small pieces and buried.
4. Once a week, spray down the mixture with water and mix thoroughly.
5. After four months, the vermicompost should be harvested. Let the container stand open for a time so the worms will move to the bottom. Scrape the vermicompost off the top. Replenish the bin as if starting over again. Don't worry if some of the worms are taken out. The worms have multiplied over the months and there are plenty of worms to maintain the bin.

Appelhof, M. (1993). *Worms eat our garbage*. Kalamazoo, MI: Flower Press.