Environmental Education at the Local, National, and Global Level

No issue demonstrates the importance of global competence more than that of the environment; our survival depends on how the world works together to tackle issues of global warming, food security, and water security. As we celebrate National Environmental Education Week, Cleary Vaughan-Lee, Education Director, Global Oneness Project, shares ways to teach about the environment at the local, national, and global level.

In his book The Nature Principle: Human Restoration and the End of Nature-Deficit Disorder, Richard Louv writes, "What would our lives be like if our days and nights were as immersed in nature as they are in technology?" Studies have shown that spending time in nature affects numerous aspects of a child's mental and physical well-being. But let's not forget to ask: How would such immersion affect the environment?

Our planet is rapidly changing, and environmental awareness—or lack thereof—will play a significant role in our planet's future. Just as much as kids need nature, nature needs kids. This reciprocal relationship is at the core of environmental education programs, which can be integrated into all classrooms—language arts, science, math, history, and social studies—helping students connect more deeply globally, locally, and personally to the natural world.

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How can students enhance their own connection and responsibility to the environment? The following individuals, organizations, and resources provide ways for teachers to incorporate an interdisciplinary approach to environmental awareness from the global to local level. At the core, the aim is to assist students in finding their own voices as global citizens and environmental stewards of this planet.

Global

Julene Reed, an international global educator, has worked with scientists, experts, and organizations all over the world, including Polar Bears International (PBI) and Dr. Jane Goodall's Roots and Shoots. In a recent conversation, Reed articulated a core attitude of environmental educators. She said, "It is important for educators to lead our students to be globally aware of our interconnected world and to understand that what happens in one part of our planet impacts other parts of our planet."

PBI is a conservation organization with the mission to "inspire people to care about the Arctic, the threats to its future, and the connection between this remote region and our global climate." Lessons, mini-courses, and student report materials are available on their website and an in-depth curriculum is available through the iTunes University channel.

Roots and Shoots, a global, youth-led community action program, has members in over 130 countries. The organization supports students as they initiate, lead, and implement their own environmental campaigns. For example, a group of 17-18 year-olds concerned about their local river in Los Angeles, coordinated a large-scale clean up with a local organization. Take a look at their five-minute video, Rivers of Peril, documenting their efforts.

Students' curiosity about global ecosystems ultimately supports their development to become environmental stewards, and teachers can encourage this curiosity. If students are interested in oceans, for example, teachers could use resources from the Montana Digital Academy, which offers an oceanography course that teaches about the "biological, physical, and chemical properties of marine ecosystems" from all over the world through labs, research projects, and video field trips.

And the Encyclopedia of Life (EOL) is a great resource that brings together free, authoritative information about all life on Earth through more than 1.9 million species pages that provide descriptions, images, sounds, videos, maps, and other content under Creative Commons licenses. For students and teachers, EOL also has an education site that provides lesson plans, games, and interactive tools within the context of important habitats.

National

The green schools movement is gaining momentum. The movement works to reduce the environmental impact of schools, improve student health and the environmental quality of school buildings and grounds, and provide environmental education to students. In 2011, the Green Ribbon Schools award program was launched by The U.S. Department of Education to support green schools.

 In 2014, the Center for Green Schools (the Center) at the U.S. Green Building Council (USGBC) coordinated the creation of a National Action Plan for Educating for Sustainability, which features recommendations from leaders in the field for scaling education for sustainability. Jenny Wiedower, the K-12 manager at the Center, explained that the plan has a rapid timeline with the goal of all 50 states adopting comprehensive green schools policies inclusive of a sustainability education graduation requirement by the year 2040. This will require, increased public awareness, education and action, and shifts in school culture.

To support this goal, the Center created Learning Lab, a global subscriber web platform that provides sustainability resources to K-12 teachers and school leaders. Resources include "comprehensive, project- and STEM-based curriculum that encourages student leadership, environmental literacy, and real-world action." A tip for teachers: Learning Lab launched this past March and is offering their resources for free until August 2016.

The following organizations are also dedicated to high-quality environmental education and teacher resources:

Green Schools National Network

Ecorise

Captain Planet Foundation

Cloud Institute for Sustainability Education

Environmental Charter Schools

Local Actions

Students are especially motivated to learn and act when they can become change agents in their own environments. For the past four years, I've participated in Redwood High School's sustainability festival near my home in Northern California. Created by science teacher Joe Stewart, the festival is celebrating its 10th year, continuing its goal "to raise student awareness around sustainability issues." Students participate in various activities each year that include environmental restoration, biking to school, and eating locally. Local organizations participate by offering 40 workshops over two days. Topics are relevant to multiple disciplines and include volunteerism, environmental media production, cross-cultural environmental opportunities, waste issues, and more.

At last year's festival, I screened the short film "Isle de Jean Charles," which is part of a climate change collection from my organization, the Global Oneness Project. The film depicts a small island community in southern Louisiana that is sinking due to rising sea levels. Residents are some of the first official U.S. climate refugees. During a class discussion, students discussed the advantages and disadvantages of living near the coast.

Looking for student-led, environmental action projects? Journalist and author Suzie Boss compiled a great list on Edutopia.

For English language arts teachers eager to bring nature into the classroom, Commonlit is a great resource. It's a free, research-based, digital collection of fiction and non-fiction literature for use in grades 5-12 created by teachers for teachers. Two environmental themes explored on the site, man vs. nature and technology, progress & industry, contain short written pieces, including Jack London's "To Build A Fire" and an excerpt from FDR's 1936 speech addressing the Dust Bowl that led to an agricultural crisis. Accompanying instructional materials include text-dependent writing and discussion prompts.

Whether students are learning about global weather patterns, ecosystems, cleaning up a local stream, or reading and writing nature-based stories, environmental education brings together the personal and global, and helps young learners find their place in the world. Only by witnessing and experiencing one's connection to the natural world can students become responsible guardians of our changing planet.

Environmental Literacy

Informed Decisions and Actions

Environmental Literacy encompasses experiences, understanding and action. While knowledge and understanding are important components of environmentally literate citizens, the key is connecting what we know and what we do.

According to "Developing a Framework for the Assessment of Environmental Literacy" published by the North American Association for Environmental Education (NAAEE):

An environmentally literate person, both individually and together with others, makes informed decisions concerning the environment; is willing to act on these decisions to improve the well-being of other individuals, societies, and the global environment; and participates in civic life. Those who are environmentally literate possess, to varying degrees:

Knowledge and understanding of a wide range of environmental concepts, problems, and issues;

A set of cognitive and affective dispositions;

A set of cognitive skills and abilities;

The appropriate behavioral strategies to apply such knowledge and understanding in order to make sound and effective decisions in a range of environmental contexts.

Knowledge and Deeds

Environmental literacy is more than comprehending, it is demonstrating capabilities. So while students learn about photosynthesis or water quality, those facts alone does not demonstrate environmental literacy.

Today's students must understand the ecological, economic, and cultural connections between humans and the environment. And they must recognize the impact of decisions made by individuals (including themselves) and governments.

Environmental literacy is integral to fostering this understanding, emphasizing that humans are part of a global community and that actions and decisions made locally by individuals or communities have effects that go well beyond local environments.

Environmental Literacy Defined

The following excerpt is taken from the Roadmap to Environmental Literacy for Vermont, and helps to explain what the term environmental literacy is all about.

Being literate in the broadest sense means to have knowledge or competence. When we consider environmental literacy, according to the North American Association of Environmental Education, knowledge and competence includes the following:

An understanding of the Earth as a physical system and the living environment, including humans and their societies within the landscape

A familiarity with some basic modes of inquiry, critical thinking and problem-solving skills, and an ability to interpret and synthesize information

An understanding of the ideals, principles, and practices of citizenship in order to participate in resolving issues

Motivation and empowerment to act, understanding that what people do as individuals and groups can make a difference

In short, understanding, problem-solving, citizenship, and action.

Fostering environmental literacy may include activities such as taking school children on a hike with a naturalist or families attending a local maple sugaring festival. It may also include neighbors cooperatively sharing resources such as lawn mowers, log splitters, roto-tillers, or even just canoes or bicycles. It could be the town road crew working with landowners to install beaver baffles to prevent washouts. Environmental literacy involves community members who are engaged in discussion at town meetings, employees who promote sustainability policies in their workplaces, and students planning community service projects. It might be employees advocating for bike racks or showers in their workplaces or students coordinating recycling programs in their school or energy audits in public buildings.