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Environmental Education in a Standards-Based Curriculum

In large measure, the current educational reform movement hinges on setting standards for learner achievement. The 1991 federal education reform act variously known as Goals 2000 or America 2000 mandated standards-setting efforts for the traditional disciplines. In the ensuing years, voluntary national standards have been put in place for disciplines from science to English language arts, and from fine arts to mathematics and the social studies.

Across the country, states and school districts are beginning to hold teachers accountable for their students meeting these standards, or other benchmarks set at the state and local level. One effect of this accountability is that curricula are being adjusted so they're more likely to lead students to perform well on standards-based evaluations. Another effect is that teachers are feeling more pressed than ever to find time for new content and teaching activities within a crowded curriculum.

Environmental education is often seen as one of the "add-ons" to a set curriculum, or just something else to find time for in a school day that is already filled to capacity. Supported by hundreds of high quality instruction materials, environmental education can and does "fit" in the curriculum. The trick now is to make the link between the traditional disciplinary standards and environmental education.

Each of the voluntary national standards for traditional discipline areas does, to one degree or another, incorporate learning and instructional goals that are aligned with those of environmental education. For example, essential ecological knowledge is included within the geography standards. Similarly, understandings of measurement, patterns and relationships, and statistics and probability, all elements of the standards for mathematics, are also important to environmental literacy.

Environmental education programs can be used to teach a variety of concepts and skills within disciplines. And, because environmental education is at its heart an

integrative undertaking, it can help educators and learners cross disciplinary boundaries. Understanding environmental connections requires that students are able to link methods and ideas from natural and social sciences, arts, mathematics, and humanities. Learning about the environment and environmental issues is a continuing lesson in interconnectedness that draws upon the core disciplines and provides a meaningful context.

Until recently, there's been no comprehensive means of showing educators how they can develop programs that meet the needs of both the core curriculum and environmental education. Excellence in Environmental Education-Guidelines for Learning (K-12), published in 1998 by the North American Association for Environmental Education, makes these links explicit. Developed through a national process of review and comment involving over 2500 individuals and organizations, Excellence in Environmental Education provides a shared view of the core concepts and skills that environmentally literate citizens need. Guidelines and performance measures are suggested for the fourth, eighth and twelfth grade levels. Each guideline is also tied to related discipline-based standards.

Excellence in Environmental Education provides the scaffolding upon which cohesive, sequential, comprehensive environmental education programs can be created. Taking a holistic approach to environmental education can create synergy among its basic parts - or subject areas. As students analyze and evaluate the complexities of an environmental issue, they begin to understand intricacies and connections they could not have discovered if the information was presented fact by fact and subject by subject outside the context of the environment as a whole.

Only the development of a comprehensive environmental education program insures that it will not be marginalized or fragmented. To be effective, these programs must be constructed with a clear understanding of the knowledge and skills that lead to environmental

literacy, and a vision of environmental education's place within the school curriculum. Other resources are available to help educators create environmental education programs that fit within and further the effectiveness of a standards-based curriculum.

Need more resources?

There are a number of other resources available to help educators use environmental education to help create a comprehensive social studies curriculum. Some of them are listed below as references to this information sheet. Others are available on the databases of Educational Resources Information Center (ERIC) and Eisenhower National Clearinghouse (ENC). On line, these resources can be accessed by typing

<http://www.eelink.net>

Page down to CCLASS-RESOURCES DIRECTORIES, to EE-RELATED EDUCATION SITES, which will lead you to ERIC or ENC. You will then be able to search ERIC and ENC databases by following the appropriate pointers. Some of these resources are listed below.

From ERIC

Simmons, Deborah, And others. (1996). Environmental Education Materials: Guidelines for Excellence. Washington, DC: North American Association for Environmental Education. (ED 403145)

These guidelines are a set of recommendations for developing and selecting environmental education materials with the aim of helping developers of activity guides, lesson plans, and other instructional materials produce high quality products, and providing educators with a tool to evaluate the wide array of available education materials.

Fortier, J.D., Grady, S. M., Susan, M., Lee, S., Marinac, P. A. (1998). Wisconsin's Model academic Standards for Environmental Education. Bulletin No. 9001. Madison: Wisconsin State Department of Public Instruction. (ED 426855)

This guide to Wisconsin's academic standards for environmental education. Describes the process and development of state environmental standards. Designed for administrators, school board members, and teachers, the guide explains the purpose and goals of creating standards and contains a brief history of environmental education in Wisconsin.

From ENC

Conley, D. T. (1996). Are you ready to restructure?: a guidebook for educators, parents, and community members. Thousand Oaks, CA: Corwin Press,

Inc.(ENC-006065)

This book is designed for individuals wanting to make fundamental changes within their school. It is intended for administrators, teachers, school boards, parents, students, and other community members. It aims to provide these individuals with information that equip them to make more effective decisions for their schools.

Agribusiness and Natural Resources Education: Vocational Education Program Courses Standards. (1997) Florida State Department of Education, Tallahassee. Division of Applied Technical, Adult and Community Education. (ED 409428)

This document contains vocational education program course standards (curriculum framework and student performance standards) for exploratory courses.

Green, D., And Others (1980). The School Ground Classroom: A Curriculum to Teach K-6 Subjects Outdoors. First Edition . Portland, Oregon: Environmental Education Association of Oregon (ED219286)

Suggesting that outdoor activities can be a positive learning experience, lesson plans and activities were designed to demonstrate that the outdoors is an interdisciplinary class room to be used virtually on any school site, and to teach subject matter taught as part of the standard curriculum.

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