Exploring Environmental Issues in the Places We Live: An Overview

Why study the places we live?

Whether you live in a city center, suburb, small town, or the countryside, your community is always changing. In 1970 the United States population was 205 million, in 1999 it reached 273 million, and by 2030 it is expected to reach 351 million.[1] All of these people will need places to live, work, and play; this means that growth is inevitable, and it is actually happening faster than ever. But how your community chooses to grow can greatly impact environmental quality, public health, social capital, community character, economic resources, you're your quality of life. *Exploring Environmental Issues in the Places We Live* addresses the various ways that citizens can work together to manage the changes that accompany growth, thereby strengthening their sense of place.

Purpose of the curriculum

The purpose of this curriculum is to provide opportunities for students and other community members to conduct educational investigations focused on how local environmental issues are linked to social and economic changes. The following **goals** will help teachers achieve this purpose:

- To provide curriculum materials that give students an awareness of environmental issues connected to their local community, and that enables them to apply scientific processes and higher-order thinking skills to resolve neighborhood problems.

- To provide activities that give students avenues and knowledge by which to become effective participants in their community, so that they will care about and direct the decisions being made regarding the places they live.

- To provide a structure within which students can make partnerships in their communities, so that they understand the range of stakeholders involved and how to cooperate toward solutions.

- To provide real case-studies and examples that give students an awareness of the connection between difficult choices and resulting impacts, so they can build their confidence in making long-term sustainable decisions.

How to use the module

This module is being designed for formal and non-formal educators working with students in grades 9-12 and can also easily be adapted for an adult or middle-school audience. As a supplemental, interdisciplinary curriculum, the activities can be used as a unit of study or as stand-alone lessons to complement any curriculum. The activities address social studies, geography, civics, language

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[1] http://eire.census.gov/popest/archives/pre1980/popclockest.txt and http://www.census.gov/population/www/projections/natsum-T1.html

arts, health, math, and science concepts. In addition, each activity will be correlated to national and state education standards.

The module includes three major sections: **Background Information for Educators**, a series of inquiry-based **Activities**, and **Appendices**.

1) The **Background Information for Educators** provides a general overview of the topics covered and will help teachers lead the activities. Each activity includes its own background section as well, with additional information on that specific topic.

2) The **Activities** are designed to engage students in meaningful inquiry and to move them from *awareness,* to *knowledge,* to *challenge* or *consensus*, and finally to *action.* Following this "awareness-to-action" model of teaching, the first activity sets the stage for helping learners identify and develop a sense of place within their community. The remaining activities reinforce the sense of place concept and the connection to the local environment. Using the constructivist philosophy of teaching, each activity will build on the knowledge your students already have, as well as help them develop useful problem-solving and decision-making skills. The activities also provide opportunities for students to get involved in community-action projects and **service-learning**.

Each activity begins with a **Sidebar** that provides a quick reference to the related subjects and objectives, as well as necessary skills, materials, and time. The majority of activities are separated into **Parts** which can be conducted in smaller steps. Each activity concludes with suggestions for authentic assessment opportunities.

The activities also provide **Case Studies** which feature communities across the country. The case studies illustrate what real people are doing to address local environmental issues. Some of the case studies are integral to the activity, while others are enhancements that can help in teaching the activity and help students gain a deeper understanding of the issue. Additional case studies will be available at the PLT website: www.plt.org.

Additional computer and **Technology Enhancements** will also be provided through the PLT website, although a computer is not necessary for teaching the activities. The technological enhancements include: a resource database correlated to the different activities; a user bulletin-board for educators to share advice on implementing the curriculum; an online gallery for students to post their research, images, etc.; and suggestions for software programs that complement the lessons.

3) The **Appendices** provide additional information and resources. Please note that words that appear in bold-and-italics throughout the modules appear in the Glossary, *appendix X*.

Activity overviews:

Activity 1: Personal Places
In this activity, students investigate and report on their connection with a special place and with their greater community.

Activity 2: Community Character
In this activity, students explore community character and investigate ways their communities, including their own, are responding to growth and development pressures.

Activity 3: Mapping Your Community Through Time
In this activity, student teams investigate the social, cultural, economic, aesthetic, and environmental components of their community to create map overlays and reports describing the development of their community through time.

Activity 4: Neighborhood Design
In this activity, students explore the current layout of their neighborhood, critically evaluate a variety of development options, and formulate ideas for guiding further growth in their community.

Activity 5: Green Space
In this activity, students investigate green infrastructure at the neighborhood, community, and regional scale and explore the dual needs to accommodate population growth and protect green space.

Activity 6: A Vision for the Future
In this activity, student teams develop and present a vision for the future of an area in their community.

Activity 7: Far-Reaching Decisions
In this activity, students develop a creative presentation to exhibit how our decisions as individuals can impact distant communities.

Activity 8: Whose Water Is it? The Ogallala Aquifer
In this activity, students adopt the roles of stakeholders and debate solutions to sustain North America's largest aquifer.