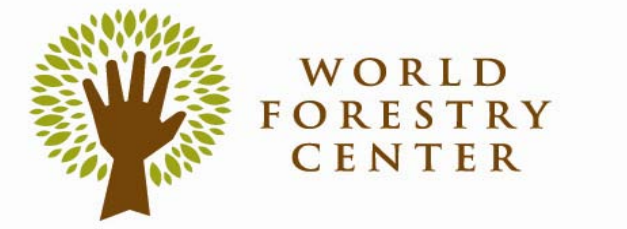




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Incorporating Forests of the World Perspective into Environmental Education

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Introduction

Environmental issues have become a front-burner topic in both the public and political arenas. The complexity of these issues and the lack of clear communication between society, the scientific community and political sphere have made progress toward sustainable solutions more challenging. Information can be confusing or lacking. Environmental literacy is therefore an essential aspect to develop the skills people need to participate meaningfully in public dialogue about environmental issues and in decision-making processes. It is also essential that people consider both the global perspective of each environmental issue and its specific local context. *Global Connections: Forests of the World*, is an educational module produced in partnership between Project Learning Tree (American Forest Foundation) and World Forestry Center. It is designed to provide ideas and guidelines about how to integrate the important topic of the world's forests into environmental education experiences. It was published in 2008 and has been used in many workshops for formal and non formal educators around the US.



Forests and education

Forests are a crucial element for life and are under great pressure from human activities. Sometimes we forget how much connection we have to forests and how dependent on forest products and services we are. Fuel, food, shelter, recreation, cultural values, air, the carbon cycle, climate, soils, and water are vital to life on Earth. As the book states: "Studying forests of the world not only give students an understanding of the world's forest ecosystems, but also helps them see how they are connected to forests and people everywhere. It also gives students a sense of responsibility toward and stewardship of local forests, as well as other people around the world."



Why study forests of the world?

- To understand how different cultures, people, and societies view and define forests.
- To learn about different ways that people around the world interact with forests.
- To identify geographic factors that determine the major types of forests around the world.
- To explain how environmental and human factors have affected and continue to affect the world's forests.
- To understand how economic, political, and social systems play a role in managing forests around the world for a variety of uses.



- To learn about sustainability as it relates to the world's forests, including ecological, economic, and social elements.
- To explore efforts around the world to protect and conserve forests and forest resources.

Curriculum development

Work on the Forests of the World curriculum began in 1996, and the book was published in 2008. NGO's, teachers, scientists, foresters, the forest products industry and other natural resource professionals developed the content. An initial survey of educators around the US assessed interest and sought to identify comparable materials presently in classroom use. The results indicated that there was a high level of interest among educators for high quality curriculum materials and supporting resources, but a lack of information easily distributable to classrooms. A high profile advisory committee was selected and a thorough process was developed to include content research, lesson plan development, writing workshops and review. A national pilot test was conducted with classroom teachers in 2006-2007. In 2010 a curriculum evaluation by independent consultants started.

What is special about the book

Some features that are encompassed with PLT philosophy are the key element for the importance of this material. The book content is special for:

- Its hands-on activities
- Its interdisciplinary approach
- Its encouragement to learners to make informed, responsible decisions after studying it
- Its use of the forest as a "window on the world"
- Its stimulation toward critical and creative thinking - even dealing with complex topics

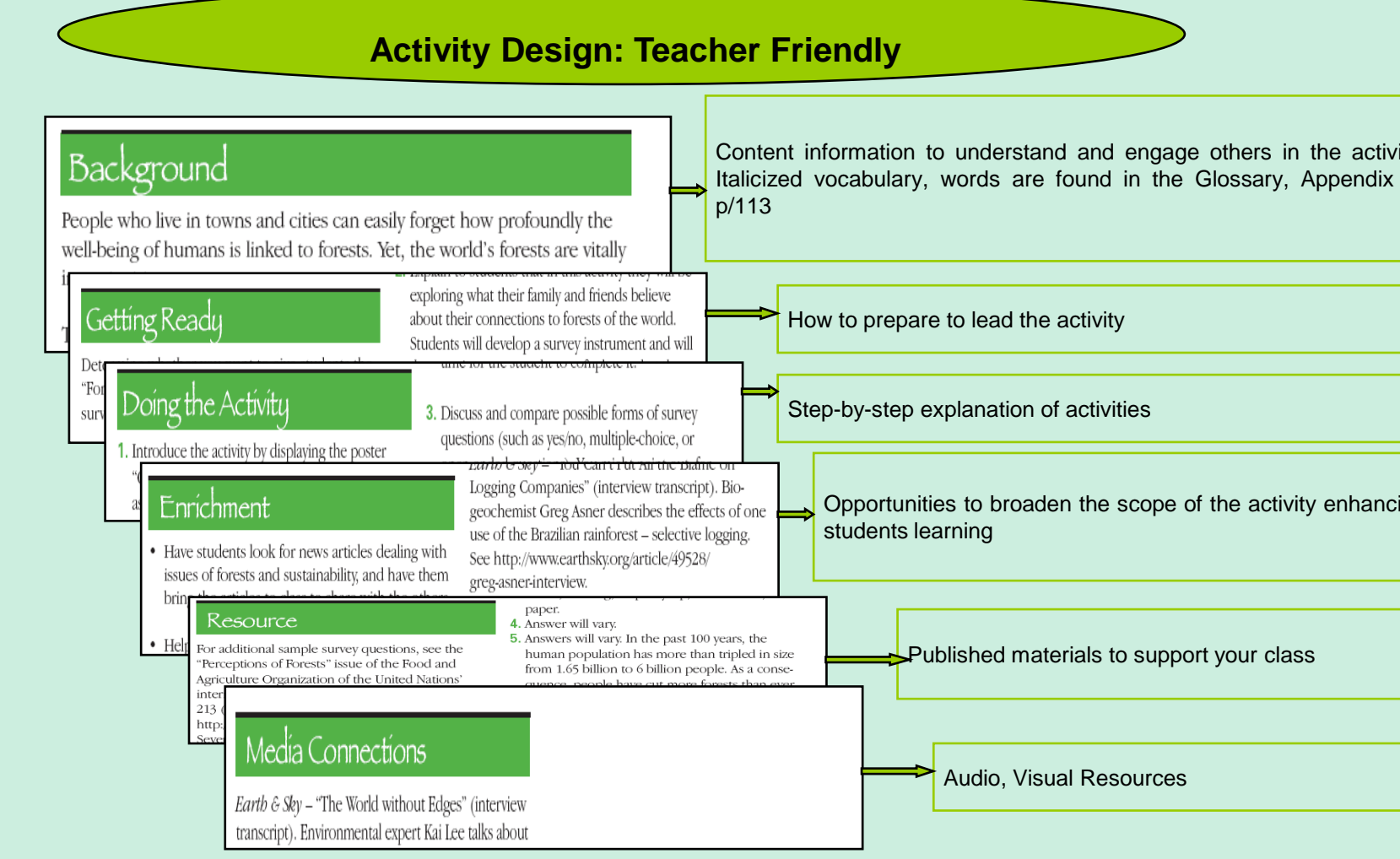
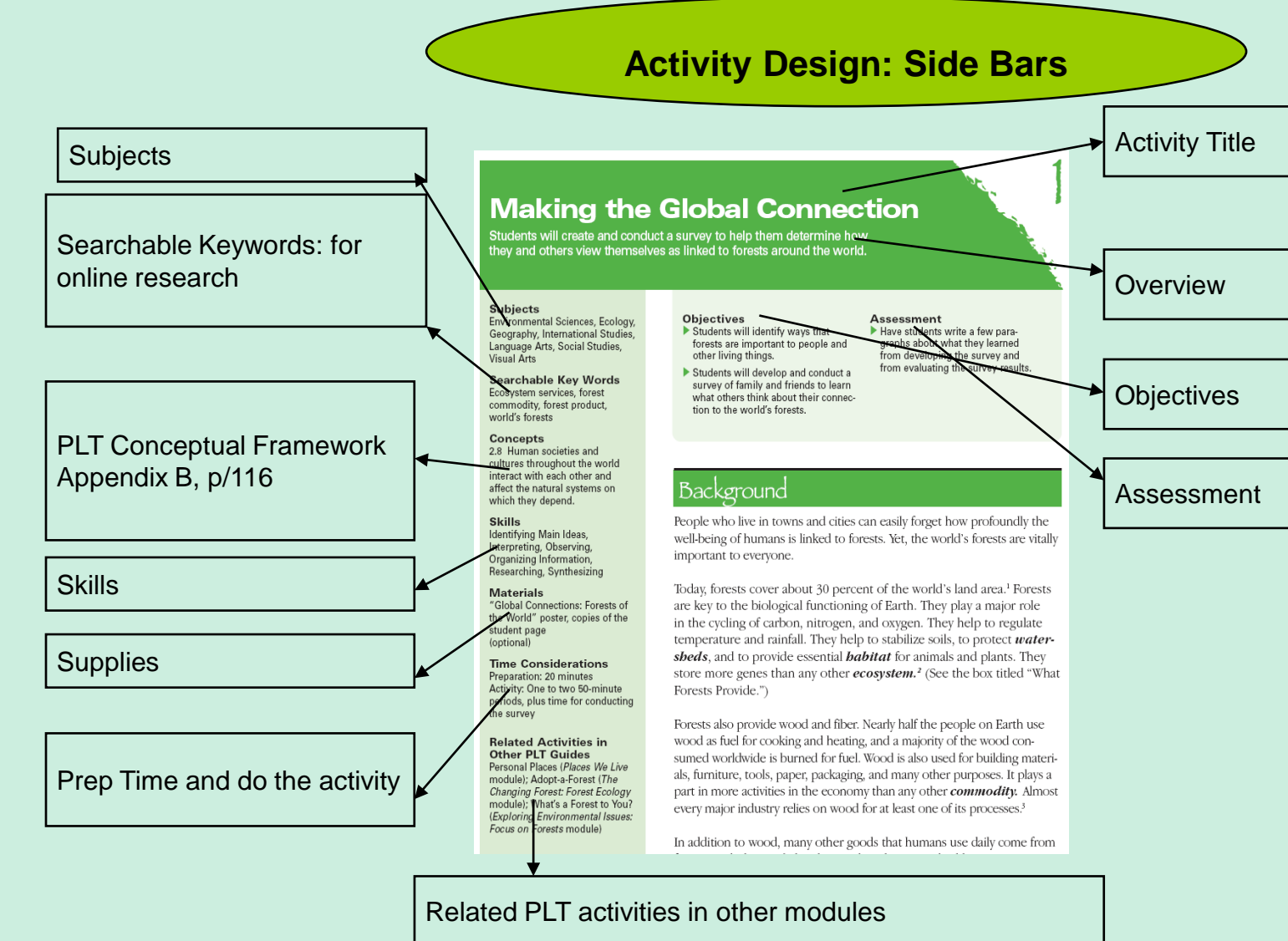
Book presentation

5 Major Themes

Diversity
Interrelationships
Systems
Structure and Scale
Patterns of Change

Each theme covers 3 topics

Environment
Resource Management & Technology
Society & Culture



Student Activities in the Guide

1. Making the Global Connection
2. What Is a Forest?
3. Mapping the World's Forests
4. Analyzing Patterns of Forest Change
5. Understanding the Effects of Forest Uses
6. Seeking Sustainability: A Global Response
7. Exploring the World Marketplace
8. Making Consumer Choices
9. Researching Forests Around the World

Conclusion

Project Learning Tree's Forests of the World curriculum offers a unique and much needed resource to educators looking to find ways to connect their students to forests and how we live. It is an excellent first step towards a more globalized perspective in classrooms on forests. Future development of the curriculum should consider the following:

- Strategies to engage more teachers in the program
- The engagement and use of the curriculum by the educators trained need to be assessed
- To motivate teachers from disciplines others than science, to use it
- There are opportunities beyond the formal classroom. The curriculum may need to be adapted in order to reach more non-formal education programs.
- The international connections throughout the book may leverage engagement with other partners. The World Forestry Center can play an increasing role in this exchange of information and best practices, and the online community is a great platform for reaching this need
- Need to create viable options for international partners to host professional development using the book in their own countries.
- The electronic material and the online community created during the last year makes this curriculum ready to reach a broader audience in order to expand the Forests of the World network – it is important to have someone directly responsible for the coordination of these efforts.



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<p>BOATS Thailand</p> <p>Sampans are common on the rivers, lakes, canals, and protected bays of Southeast Asia. These flat-bottomed, paddle-powered wooden boats are used for transportation, fishing, and even housing.</p>	<p>DESERTIFICATION China</p> <p>Blowing sand chokes agricultural land, and Beijing is often pumpled with sandstorms. Stripped of vegetation and soil, 2.500 square kilometers a year turn to desert. This change is the result of clearing forests, grazing, and collecting firewood. To stem the encroaching desert, China has launched the world's largest tree replanting effort.</p>	<p>MACAWS Brazil</p> <p>Although macaws are among the most endangered species of the parrot family, the hyacinth macaw is a relative success story. Thanks to an artificial nesting program and to public education concerning the illegal pet trade, the macaw's numbers are growing in some areas. But it is still threatened by loss of its forest habitat to logging and agriculture.</p>	<p>WOMEN'S VOICES Papua New Guinea</p> <p>In many communities, women provide for their families by gathering food, water, wood, and other materials from the forest. Despite their interest in the health of the forests, women are often left out of forest management decisions. Programs in many countries are exploring ways to give women a greater voice in forestry issues.</p>	<p>SPICES Indonesia</p> <p>Many spices are derived from the bark, sap, fruit, stems, leaves, roots, flowers, or seeds of tropical forest trees. Nutmeg (<i>Myristica fragrans</i>) is the most of an evergreen tree native to the East Indian "Spice Islands." Another spice, mace, is the seeds' bright red coating. The spice trade generally flows from the tropics to the rest of the world.</p>	<p>GOING TO MARKET Mali</p> <p>Visit western Africa and you'll see local markets filled with women selling fruits, nuts, plants, and spices gathered from the forest. Many families depend on the money earned from selling these and other non-timber products. Economic development projects are helping women improve access to market information and other resources to increase family income.</p>	<p>WOODLAND CARIBOU Canada</p> <p>These "gray ghosts" of the boreal forest need large tracts of mature forest for protection from predators and for the slow-growing lichen they eat. Once widely distributed across Canada from the Yukon to Newfoundland, populations are dwindling as development, roads, agriculture, logging, mining, and oil and gas exploration encroach on their habitat. In Alberta, where woodland caribou are on the endangered wildlife list, fewer than 7,000 remain.</p>	<p>CONVERSION OF FORESTS TO AGRICULTURE Taiwan</p> <p>Agriculture is the chief cause of deforestation in both developed and developing countries. Farming, especially on steep slopes, can be damaging to the ecosystem because of excessive tillage, pesticide use, and soil erosion. An organic rice farm in Taiwan is part of a government effort to teach farmers to create crops, to use non-chemical pest control, and to till less.</p>	<p>RESIN Philippines</p> <p>Almidge resin, or Manila copal (<i>Agave philippinensis</i>), which is used in paints, plastics, printing ink, soap, and varnishes, is a major source of export income. New sustainable tapping methods are replacing traditional methods that can damage and ultimately kill the trees.</p>	<p>COMMUNITY FORESTRY Tanzania</p> <p>In Tanzania, some communities have succeeded in forest conservation where the government has failed. With their new authority over local forests, several villages have replanted degraded lands, established springs, repaired forest roads, closed off cattle tracks, and increased income generated from the forests.</p>	<p>ORANGUTAN Indonesia and Malaysia</p> <p>Orangutan means "person of the forest." This great ape's 90 percent population decline is largely the result of destruction of its forest habitat. Logging, agriculture, and plantations are major threats, along with hunting. Protecting the orangutan from extinction will require creating and expanding protected areas and restoring the trade in meat and wild animals.</p>	<p>FLOODING Bangladesh</p> <p>In the natural flood plain of Bangladesh, forest loss, urbanization, and rising sea levels are a devastating combination. Natural river channels - silted up with silt eroded from deforested slopes or filled in to develop housing and roads - cannot contain the annual monsoon deluges. Government - built river embankments and drainage systems provide some relief, but improved forest management practices and flood warning systems are critically needed.</p>	<p>BAMBOO China</p> <p>Often called the "poor man's timber," bamboo (<i>Bambusa</i>) is actually a grass. It plays a crucial role in rural economies throughout Asia. It grows up to three feet a day, a third faster than the fastest growing trees. Bamboo is used for everything from food to building materials, furniture, and ornamental plants.</p>
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