FLORIDA PROJECT LEARNING TREE
Facilitator Handbook Supplement

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8th edition

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Footnotes
1. This document is CIR 1455, one of a series of the School of Forest Resources and Conservation, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Published: October 2004. Revised January 2007, October 2009.
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Acknowledgments

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Part I: Introduction to PLT

Welcome to the ranks of Project Learning Tree (PLT) Facilitators. You are joining a special group of educators and resource managers who are volunteering to help educators obtain and learn to use PLT materials. In Florida, every PLT workshop should include the following:

1. **An introduction to PLT.** This can be fairly brief. The background you need is presented in Part I of this manual.

2. **PLT materials.** This is about the actual PLT materials. To do this well, you should be familiar with the Learning Cycle and Facilitation Skills material from the Florida PLT, WET and WILD Facilitator Handbook (pages 4 and 38, respectively). Of course, you need to select activities that are appropriate for your group (see page 18 in this handbook for suggestions).

3. **Correlation to the Sunshine State Standards (SSS) and the Florida Comprehensive Assessment Test (FCAT).** A section of this manual includes suggestions for activities that can supplement curricula addressing SSS benchmarks and for preparing youth for the FCAT. If the workshop audience is teachers or people who work with teachers, this may be the most important component of the workshop.

4. **Experience PLT activities.** One key to presenting a balanced workshop and presenting participants with a well-rounded look at the various activities in the Activity Guide or Secondary Modules is to use activities from the different themes. The manual includes a list of core activities to help guide you in planning the agenda.
WHAT IS PLT?

PLT is an award-winning international environmental education program designed for formal and nonformal educators working with students in grades PreK–12. PLT helps students learn about the world around them, their place within that world, and their responsibility for it. Through its many hands-on activities, PLT helps students become:

- Personally aware of their presence in the environment
- Personally aware of the multiple values of natural resources, including ecological, economic, cultural, and societal
- Better able to understand their impact on and responsibility to the environment
- Equipped with the skills and knowledge to make informed decisions regarding the management and use of the environment
- Increasingly confident in their ability to take action based on their decisions

PLT is designed to work in rural, suburban, and urban areas; in formal and nonformal educational settings; and both indoors and outdoors. The PLT activities emphasize conceptual learning and skill building as well as use effective, student-centered, instructional strategies, such as hands-on and cooperative learning, multiple intelligences, and constructivism.

PLT promotes the process of education and advocates sound principles of teaching. The activities encourage educators to provide students with opportunities to gather information, communicate, cooperate, assess values, solve problems, and use critical thinking skills. Because many PLT activities are hands-on and invite students to apply their knowledge and skills, educators can use them as evidence of students’ learning and practice for “performance-based” assessments.

PLT is balanced on value-sensitive topics. It is especially important for workshop facilitators to keep this in mind and always maintain a balanced perspective in facilitation. The PLT activities and materials are designed to treat issues fairly and do not advocate any one particular point of view. PLT recognizes that people need information from a variety of sources in order to make their own informed decisions.
The Environmental Education Activity Guide is available for educators for grades preK-8. Also available for these grades is an Energy and Society module, which provides information and activities about energy and supplements the preK-8 guide. Secondary modules on the topics of forest ecology, forest issues, municipal solid waste, building sustainable communities, world forests, biodiversity, and risk are available for educators of grades 9-12. A wildland fire set of resources, and PLT activity adaptations are also available to supplement the preK–12 materials.

*PLT GreenSchools!* is a new initiative that provides training and funding for students and teachers to investigate environmental issues at their school and engage with their community in service-learning projects that create green and healthy learning environments. The program builds upon the many PLT schools around the country that incorporate Project Learning Tree into their academic curriculum across multiple grade levels and classes. As of October, 2009, six Florida PLT Schools are participating in the *GreenSchools!* program.

PLT Early Childhood Activity Guide will be released in early 2010. This activity guide is a resource specifically designed and created for educators that work with early childhood audiences. The new PLT: Early Childhood Activity Guide will address a child’s need to explore, discover, and communicate his or her ideas in expressive ways by integrating music and movement, nature exploration, literature, art and cognitive components into the activities.

PLT added a program to enhance local neighborhoods called *GreenWorks!* Through the *GreenWorks!* initiative, PLT provides mini-grants to PLT educators and their students who implement an action plan to improve their neighborhood environment. See Part II for additional details on these publications.

The PLT activity guide and modules are not for sale, but are provided free or at a nominal charge to educators when they participate in a PLT workshop. There is a registration fee for attending workshops. Florida educators may also receive an Urban Forest Supplement to PLT for grades 3–8, which provides tools to help students understand Florida’s urban forest and supplements the preK–8 guide.
PLT’S MISSION

PLT uses the forest as a "window on the world" to increase students' understanding of our complex environment; to stimulate critical and creative thinking; to develop the ability to make informed decisions on environmental issues; and to instill the confidence and commitment to take responsible action on behalf of the environment.

PLT’S GOALS

- To provide students with the awareness, appreciation, understanding, skills, and commitment to address environmental issues
- To enable students to apply scientific processes and higher order thinking skills to resolve environmental problems
- To help students acquire an appreciation and tolerance of diverse viewpoints on environmental issues, and develop attitudes and actions based on analysis and evaluation of the available information
- To encourage creativity, originality, and flexibility to resolve environmental problems and issues
- To inspire and empower students to become responsible, productive, and participatory members of society
- To use the environment (or environmental issues) to integrate all curriculum areas into a thematic unit

HISTORY OF PLT

The PLT program began in the early 1970s as a joint venture between the American Forest Institute, a forest products industry trade association dedicated to improving the management of America’s forests, and the Western Regional Environmental Education Council, a non-profit organization composed of representatives from state departments of education and natural resources agencies from 13 western states. The founders of PLT had an idea for developing an effective environmental education program.
To build an effective program, the founders established two goals. The first goal was to design an environmental education program that would gain the confidence of the education community — educators must like it, trust it, and use it. The second goal was to develop partnerships between public and private sectors that ensured the curriculum was balanced, fair, and accurate — and that the activities encouraged students to consider all sides and factors when making decisions about the environment.

In addition to creating quality materials, they also created a system of implementation. They believed that for the curriculum to be used effectively, it should only be available through workshops.

The first edition of the PLT materials was published in 1976. Activities were developed by a team of writers and were thoroughly tested and evaluated. Two activity guides were available, for grades K–6 and 7–12 educators. Those two guides were in use until 1993, when the materials were revised into the PreK-8 Activity Guide and topic-specific Secondary Modules. The latest revision occurred in 2005 with the current PreK-8 Activity Guide.

Today, PLT is one of the most widely used preK–12 environmental education programs in the United States. PLT is available in all 50 states and the District of Columbia, as well as in several U.S. territories. It has also been formally adopted in Brazil, Canada, Chile, Finland, Japan, Mexico, Philippines, Sweden, and Thailand — and is informally used in a host of other countries. It has a nationwide network of nearly 100 state coordinators, each of whom implements PLT through a variety of organizations and agencies in their respective states, and more than 3,000 volunteer workshop facilitators. Through workshops, more than a quarter of a million educators have received PLT materials and they, in turn, have reached millions of young people.

PLT owes much of its success to its original development through the cooperative efforts of the industrial, scientific, and education communities. Through its commitment to balanced environmental education, PLT has enjoyed the continued support of these communities.

PLT’s ongoing program development and evaluation process has ensured that these materials are of a high quality. As a result, PLT has received numerous awards and recognition from the following organizations:
ASSOCIATED PROGRAMS

The success of PLT has led to the development of two other national environmental education programs Project WILD and Project WET. Project WILD uses wildlife as a focus for teaching environmental practices, while Project WET promotes stewardship of water resources.
HISTORY OF FLORIDA PLT

1977: PLT came to Florida via the Florida Department of Education.

1984: Leadership was transferred to the Florida Cooperative Extension Service and the Department of Forestry at the University of Florida.

1990: The Florida Project Learning Tree Steering Committee formed to assist with program development and delivery. This group of educators and natural resource professionals from the public and private sectors created a Five Year Action Plan and established PLT Central, which at that time was under the administration of the Florida Division of Forestry.

1992: The Florida Forestry Foundation endorsed and adopted PLT as a central element of its education efforts and effectively took over management and administration of the program.

1997: The PLT Schools Program was developed.

2001: The PLT Environmental Education Center Program was developed.

2002: PLT Central was reorganized and moved to the University of Florida’s School of Forest Resources and Conservation; under oversight of the PLT Steering Committee.
*See Appendix D for listings of members of the Steering Committee, active facilitators, and designated PLT Schools and PLT Environmental Education Centers.
FLORIDA PLT SCHOOLS

The PLT School Program is a special award and designation in Florida to signify that

- At least 50% of the teaching faculty from an elementary school or 50% of the teaching faculty at grade or subject level in a middle or high school have attended a PLT workshop. Pre-K PLT Schools applicants must have 50% of the educational staff PLT certified.
- The school has chosen either one week each year as PLT Week or the teachers incorporate at least five activities from PLT into their lesson plans throughout the year.
- The principal has selected a PLT Coordinator from the faculty.

Principals, PLT-trained educators or facilitators, or Steering Committee members can nominate schools at any time during the year (a nomination form is provided in Appendix C).

Approved PLT Schools receive
- A colorful PLT School flag
- An engraved plaque
- A Tree Trunk of teaching aids
- An opportunity to participate in the biannual PLT Schools Conference, held to provide an opportunity for teams of teachers to share their ideas and learn more about forests and environmental education.

FLORIDA PLT ENVIRONMENTAL EDUCATION CENTERS

Florida PLT Environmental Education Center is a designation for nature centers, environmental education centers, school district sponsored centers, etc. that use PLT. Centers applying for this designation must meet the following criteria:

- The center must host and conduct at least one PLT educator workshop each year.
- The center must maintain an active PLT facilitator on staff (can include paid or volunteer) who is designated as the PLT Center Coordinator.
Environmental education centers can apply at anytime during the year (an application is provided in Appendix C).

Approved PLT EE Centers receive
- A certificate with the certification year, which will be re-issued as the yearly requirement is met.
- A news release on the center’s certification will be sent to local papers.
- Be listed on the Florida PLT Web site as an active center with a link to their web site.

OUTSTANDING ACHIEVEMENT AWARDS

An Educator of the Year, Facilitator of the Year, and Business Partner of the Year are chosen by the Florida PLT Steering Committee to recognize an outstanding individual or organization in each of these categories. The recipients must meet high standards for helping with workshops or using PLT in the classroom. The Educator of the Year recipient is nominated by Florida PLT for the National PLT Outstanding Educator of the Year Award. The PLT Legacy Award, established in 2008, may be presented to an individual who has shown a sustained commitment to the Florida PLT program. This is not an annual award.

The National PLT Outstanding Educator of the Year award goes to five PLT educators. Five of Florida’s teachers have been chosen for this honor:

* Myra Jeffries, 1994
* Rodney Ivey, 1996
* Phillip Smith, 2001

* Leon Mays, 2005
* Fred Weichmann, 2004
* Michelle Hunter, 2007

To nominate individuals or organizations, please download the nomination forms from our web site at http://sfrc.ufl.edu/plt/facilitators/awards_and_nominations.html.
SPONSORSHIP

PLT is administered nationally by the American Forest Foundation (AFF). AFF is a 501(c) (3) charitable education foundation supported by grants from individuals, foundations, and industries. PLT’s partners include the Council for Environmental Education, the National Association of Conservation Districts, the Society of American Foresters, the U.S. Department of Agriculture Forest Service, the U.S. Department of Interior Bureau of Land Management, the National Association of State Foresters, the National Association of Professional Forestry Schools and Colleges, and the World Forestry Center.

Florida Sponsorship

In Florida, PLT coordination and implementation is led by the School of Forest Resources and Conservation/University of Florida and supported by the Florida Division of Forestry, the Florida Forestry Association, and the University of Florida’s IFAS 4-H Youth Program.

PLT Sponsors represent a broad array of businesses and not-for-profit organizations. Below is a partial list of our many supporters.

American Forest Foundation  Kempfer Sawmill, Inc.
Callahan Timber Company, Inc.  Leon County Extension Office, UF/IFAS
Credit Union of Northwest Florida  M & M Trucking
Coastal Plywood Company  Packaging Corp. of America
Cremer Wood Inc.  Plum Creek Timber Co.
Florida Association of Consulting Foresters  Rayonier Foundation, Inc.
Florida Forest Service  Shadowlawn Farms
Florida Forestry Association  Shield Properties, Inc.
Florida Sustainable Forestry Initiative, State Implementation Committee  Southeastern Wood Producers Assoc., Inc.
Friends of Green Cay Nature Center  St Petersburg College
Friends of the Florida Caverns State Park  T.R, Miller Mill Company
Friends of the US Fish and Wildlife Service  UF/IFAS 4-H Youth Program
International Paper Co.  UF School of Forest Res. and Con.
JEA Electric  USDA Forest Service
Jowett & Wood, Inc.  Wood Products, Inc.
PLT MEMORIAL AND RECOGNITION PROGRAM

Florida PLT established a Memorial and Recognition Program in 2006 to celebrate those who share a passion for conservation education. The PLT Memorial and Recognition Giving Program offers a meaningful way to celebrate and remember colleagues, friends and loved-ones whose passion for environmental education impacts the lives of so many. The program will provide critical support for environmental education programs that will have a lasting positive impact on the youth of Florida and the future of our natural resources and the environment. Tax-deductible contributions can be made directly to Florida PLT programs in memory of those special individuals, or in recognition of those who continue to share their enthusiasm and educational ideals.

Family and friends can make contributions in lieu of sending flowers or cards for funerals, or in recognition of special occasions and accomplishments such as winning PLT’s Educator of the Year award. Acknowledgement and Donor Thank You Cards are sent in response to each tax-deductible contribution received. The form is available in Appendix C.
Part II: PLT Materials and Programs

MATERIALS

Prek-8 Activity Guide

PLT’s Framework

The PLT conceptual framework is built around five major themes: Diversity, Interrelationships, Systems, Structure and Scale, and Patterns of Change. (The conceptual framework can be found in the PreK–8 Activity Guide on page 375.) Each theme covers the areas of Environment, Resource Management and Technology, and Society and Culture. PLT activities integrate the themes within science, language arts, social studies, art, music, and physical education.

The conceptual framework lets the users of this program know what knowledge and skills to expect learners to acquire while participating in PLT activities. Without a conceptual framework, the activities in the preK–8 guide and Secondary Modules have no real purpose or direction. Anyone can do fun things, but teachers have to actually teach something while doing these fun things. The framework provides the structure, direction, and purpose for the activities.

Although the guide contains in-depth information on specific topics, it is not designed to be an all-inclusive or comprehensive curriculum. Instead teachers are invited to fill in program gaps with content that relates to their community, expertise, interests, or needs of their students.

National Project Learning Tree suggests educators attend a 6 hour minimum workshop to receive the activity guide. This allows the facilitator to model activities from each theme. The Florida PLT Steering Committee suggests core activities for workshops. They offer a mix of rural and urban information, content and skills, and indoor and outdoor settings. For an example of an Educator Workshop agenda see page 29 and see page 25 for core activities.

Connection to the Classroom

A variety of educational elements have been incorporated into the PreK–8 Activity Guide to address challenges in education, for example, new technology and differentiated instruction, as well as environmental issues such as energy demand and global warming.
Reading Connections
A list of relevant books has been added to each activity in a box entitled “Reading Connections.” A new component for several activities is a “read aloud.” Educators are given additional techniques for effectively expanding upon the reading with students. The use of relevant books has been integrated into an activity and discussion questions have been added.

Differentiated Instruction
Teachers are able to provide additional challenges for gifted or quick learners while ensuring that the lesson is comprehensible and accessible to those still acquiring English Language skills and to students with disabilities. Some of the methods incorporated include: highlighting key vocabulary, creating links to prior knowledge, and providing nonlinguistic representations.

Authentic Assessment Techniques
All of the assessments for the activities were reviewed and updated, or expanded as needed. One focus was to ensure there was an authentic assessment in order to design an evaluation that matches the instructional goals of the activity. This section has been moved to the beginning of the activity.

Technology Connections
Providing students with opportunities to use technology in the classroom allows students to gain control over their own learning by making instruction more student-centered, encouraging cooperative learning, and stimulating teacher/student interaction. The technology cross reference appendix provides a quick reference to technology opportunities within the activities.

Support Resources
Educators can search by activity to locate support resources for each activity in the guide. Resources include printable student pages, technology connections, stories, charts, illustrations, and more. To access these resources go to the National PLT web site at http://www.plt.org, go to "Curriculum" and then "PreK-8", scroll down the page until you see "Additional Resources. The Florida PLT website also has a list of resources and aids at http://sfrc.ufl.edu/plt/curriculum/resources_and_supplements.shtml
The Five PLT Themes

1. **Diversity** — demonstrating the wide array of habitats, societies, technologies, and cultures.

2. **Interrelationships** — highlighting ecological, technological, and social-cultural systems as interactive and interdependent.

3. **Systems** — teaching how environmental, technological and social systems are interconnected.

4. **Structure and Scale** — demonstrating how technologies, societal institutions, and components of natural and human-built environments vary.

5. **Patterns of Change** — showing how structures and systems change over time.

**Early Childhood Program**

The new PLT: Early Childhood Education manual builds on the early childhood activities in the PLT PreK-8 manual and is specifically designed and created for educators that work with early childhood audiences. The new PLT: Early Childhood Activity Guide addresses a child’s need to explore, discover, and communicate his or her ideas in expressive ways by integrating music and movement, nature exploration, literature, art and cognitive components into the activities. The PLT: Early Childhood program has three major components: 1) professional environmental education development for Early Childhood Professionals; 2) the PLT: Early Childhood Activity Guide for Early Childhood providers, and 3) a PLT Music and Movement CD that supplements the PLT: Early Childhood Activity Guide.

**Secondary Modules**

Several PLT high school modules are currently available:

- *The Changing Forest: Forest Ecology*
- *Forests of the World*
- *Exploring Environmental Issues*
  - Focus on Forests
  - Focus on Risk
  - Municipal Solid Waste
  - Places We Live
Each module contains in-depth background information for the teacher and student activities. These interdisciplinary modules encompass key concepts from social science, humanities, sciences, and math. In addition, a biodiversity module is in development.

National PLT suggests Secondary Educator Workshops be at least two hours for participants to receive modules. Facilitators interested in working with Secondary Modules should contact the state coordinator.

**Urban Forest Supplement**

The vast majority of Florida teachers and youth live in urban forests. While some of the PLT activities are well suited to being used in urban areas, few of them convey the many benefits of urban forests to city residents. This supplement identifies existing PLT activities that can help meet urban forest concepts, offers minor adaptations so more PLT activities can be relevant to the urban forest, and suggests several major extensions to six PLT activities. In addition, six new activities are offered. Guide is available to download for free from our web site. Contact the PLT Coordinator for the availability of copies to distribute free of charge at your workshops.

**Energy and Society™**

PLT’s Energy and Society program kit provides educators with tools and activities to help students in grades 3–8 learn about their relationship with energy and investigate the environmental issues related to energy’s role in society. Energy and Society helps students develop critical thinking skills to make decisions about their personal energy use. In addition to hands-on activities, Energy and Society integrates music and dance to enhance the study of energy issues.

**Literacy and Nature**

The state of Florida places a strong emphasis on reading at all grade levels, especially in elementary schools. Many PLT activities suggest book titles to integrate reading and science but do not provide reading lesson plans or worksheets. Florida PLT has developed the Literacy and Nature curriculum for third and fourth grade teachers. Four PLT activities are highlighted, with associated complementary, popular reading books. For each book reading exercises and writing prompts were developed, modeled after exercises teachers use with their classroom reader.
**New Forest Health Education**

PLT’s Forest Health educational program is designed to inform students on the issues critical to the vitality of Florida’s forests. Florida PLT has free supplemental Florida forest health education materials to give to educators. Included in the materials are, a Tree Disease and Forest Insect ID Flash Card Deck, 2 DVD videos produced by the Florida Division of Forestry and a CD containing nine customizable Powerpoint presentations. The program has separate materials available for both middle and high school students.

**GreenSchools! Investigations**

The *PLT GreenSchools Investigation* program provides training and funding for students and teachers to investigate environmental issues at their school and engage with their community in service-learning projects that create green and healthy learning environments. The program builds upon the many PLT schools around the country that incorporate Project Learning Tree into their academic curriculum across multiple grade levels and classes. There are three components to this program: (1) PLT professional development for teachers and students, (2) Teachers learn how to integrate environmental education into their academic lessons and receive PLT’s curriculum materials, (3) Teacher and student teams learn how to assess current environmental conditions in and around their school using five sets of *GreenSchools! Investigations*, and (4) Teachers and students learn how they can involve their community in a *GreenWorks!* service-learning project to improve an aspect of their school environment.

**GreenWorks!**

*GreenWorks! is the service-learning, community action program of PLT, built around action projects that partner educators, students, and communities. GreenWorks! blends service activities with the academic curriculum and addresses real community needs as students learn through active engagement.*

*GreenWorks! environmental action projects link classroom learning with the real world. By combining the environmental knowledge and resources of PLT with community action initiatives, GreenWorks! action projects make a difference in how young people think, in their sense of responsibility toward their communities, and in their understanding of their relationship to the environment.*
PLT provides a guidebook with practical pointers for getting a GreenWorks! project off and running. Many PLT activities in both the preK-8 and secondary curriculum guides lend themselves to GreenWorks! projects. You can also apply for a GreenWorks! grant to help get you started on your project.

The GreenWorks! program provides a good supplement to Give Forests a Hand, a service learning action guide for middle schoolers. Florida’s 4-H project books also provide Florida-specific adaptations to complement many PLT activities. All of these resources are available through your county extension office or http://edis.ifas.ufl.edu.

The following chart on page 25 is a quick reference for the publications and resources offered by Florida PLT.

Facilitator’s Corner

The PLT Web site includes a special section for facilitators. The Facilitator’s Resources has a printable version of the PLT, WET and WILD Facilitator Handbook and the Project Learning Tree Facilitator Handbook Supplement, PLT clipart for use on flyers and agendas, workshop materials from sample agendas and flyers to presentations and handouts, Florida PLT Awards information, and information on our Sapling Program.

Florida PLT’s social media outreach efforts include a Facebook page which can be easily accessed by searching for “Florida Project Learning Tree” once logged into Facebook at www.facebook.com. There is also a Florida PLT group page within the national website’s online community available here: www.connect.plt.org.
<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Grade Level</th>
<th>How to Obtain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Childhood Guide</td>
<td>Manual contains multidisciplinary activities that target the pre-K audience</td>
<td>Pre-K</td>
<td>6-Hour Workshop</td>
</tr>
<tr>
<td>Environmental Education Activity Guide</td>
<td>Manual contains 96 multidisciplinary activities grouped by theme, storyline, and subject matter. Topics include forests, wildlife, water, community planning, waste management, and energy.</td>
<td>PreK–8</td>
<td>6-Hour Workshop</td>
</tr>
<tr>
<td>Energy and Society</td>
<td>Students learn about their relationship with energy and investigate the environmental issues related to energy’s role in society. Includes a music CD and dance video/DVD.</td>
<td>3–8</td>
<td>6-Hour Workshop or contact PLT Central</td>
</tr>
<tr>
<td>Spanish Translation of Student Pages</td>
<td>Translation of the Student Pages and Glossary from the Environmental Education Activity Guide.</td>
<td>PreK–8</td>
<td>Contact PLT Central</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>Students step back from specific issues and species and examine broader concepts and larger connections – not just biological, but political, cultural, ethical, and economic.</td>
<td>9–12</td>
<td>Free download at <a href="http://www.plt.org/cms/pages/21_21_16.html">http://www.plt.org/cms/pages/21_21_16.html</a></td>
</tr>
<tr>
<td>Forest Ecology</td>
<td>Students learn about natural systems and relationships.</td>
<td>9–12</td>
<td>2-Hour Workshop</td>
</tr>
<tr>
<td>Municipal Solid Waste</td>
<td>Students explore the role they can play in reducing waste and conserving energy.</td>
<td>9–12</td>
<td>2-Hour Workshop</td>
</tr>
<tr>
<td>Focus on Risk</td>
<td>Students learn how to assess and manage environmental and human health issues.</td>
<td>9–12</td>
<td>2-Hour Workshop</td>
</tr>
<tr>
<td>Focus on Forests</td>
<td>Students investigate and analyze environmental issues, learning how they unfold, mature, and become part of the public debate.</td>
<td>9–12</td>
<td>2-Hour Workshop</td>
</tr>
<tr>
<td>Places We Live</td>
<td>Opportunities are provided for students and other community members to conduct educational investigations focused on how local environmental issues are linked to social and economic changes.</td>
<td>9–12</td>
<td>2-Hour Workshop</td>
</tr>
<tr>
<td>Title</td>
<td>Description</td>
<td>Grade Level</td>
<td>How to Obtain</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Forests of the World</td>
<td>Students gain an increased understanding and appreciation of the diversity of world forest environments, with an emphasis on the human interaction with and dependence on those environments.</td>
<td>9–12</td>
<td>2-Hour Workshop</td>
</tr>
<tr>
<td>Urban Forest Supplement</td>
<td>New activities and suggestions are adapted to help students understand Florida’s urban forest.</td>
<td>3–8</td>
<td>6-Hour Workshop or contact PLT Central</td>
</tr>
<tr>
<td>Wildland Fire Program</td>
<td>Wildland fire education taught with a variety of PLT, Bureau of Land Management, and other federal agencies’ materials. Includes the popular <em>Burning Issues</em> CD/DVD.</td>
<td>6–12</td>
<td>6-Hour Workshop</td>
</tr>
<tr>
<td>GreenSchools! Investigations</td>
<td>Enables students to investigate environmental issues at their school and engage in their community in service-learning projects that create green and healthy learning environments.</td>
<td>Pre-K - 12</td>
<td>Workshop or contact PLT Central</td>
</tr>
<tr>
<td>GreenWorks!</td>
<td>Educators use this guide for writing mini-grants and for the implementation of a service-learning project.</td>
<td>PreK–12</td>
<td>Workshop or contact PLT Central</td>
</tr>
<tr>
<td>Give Forests a Hand</td>
<td>A community service-learning program engages groups of youths in explorations and action projects based on trees and forests.</td>
<td>3–8</td>
<td>Free to download at <a href="http://edis.ifas.ufl.edu">http://edis.ifas.ufl.edu</a></td>
</tr>
<tr>
<td>4H Project books</td>
<td>Various activities for different age groups encourage youth to learn about and explore the forests in Florida.</td>
<td>2–11</td>
<td>Free to download at <a href="http://edis.ifas.ufl.edu">http://edis.ifas.ufl.edu</a></td>
</tr>
</tbody>
</table>

**PROGRAMS**

*Facilitator Mentoring Program*

The facilitator mentoring program provides a system for training new workshop facilitators with the support of seasoned facilitators. Because there is a limited number of facilitator training workshops offered, interested PLT educators can become facilitators through the mentoring process and do not have to wait for a training workshop in their area.
Trainees will learn how to be a facilitator in a real workshop setting and will be involved in a workshop from beginning to end, from preparation to follow-up. Their designated mentor will guide the trainee in the process of planning a workshop and integrate the trainee into the workshop at various levels.

Candidates who have successfully demonstrated their ability and commitment to becoming a facilitator will receive designation as a PLT Facilitator.

Facilitator mentoring candidate criteria and an application can be found in Appendix C.

The Sapling Program

The Sapling Program is another way for facilitators to help the PLT program grow. In addition to conducting workshops, a facilitator can become involved in PLT in other areas such as promotion, networking, and recognition. For example:

- Enrich the PLT program by sharing your ideas, techniques, resources, and other information on the Florida PLT listserv or web site ([http://sfrc.ufl.edu/plt](http://sfrc.ufl.edu/plt)) and in the national PLT newsletter, the Branch. Send your ideas to the state coordinator.
- Serve as one of PLT’s resource people in your region. Help find participants for workshops and promote media coverage of PLT events.
- Sponsor a PLT School (see Appendix C).
- Support a PLT Environmental Education Center.
- Support a teacher in writing a GreenWorks! grant by offering feedback or a letter of support.
- Mentor a new facilitator.
- Encourage the use of PLT and the development of additional PLT workshops in your region. Possible settings might include booths or displays at conferences, fairs, and other gatherings. These are good opportunities to promote workshops in your area.
- Follow up with a team of teachers to integrate PLT activities across grade levels with a particular school or district.
- Help us recognize important contributions made to PLT. Send your recommendations to the state coordinator for nomination of individuals and organizations for PLT recognition.

- Give a presentation to educators or administrators about PLT.

- Work with county extension agents and Division of Forestry foresters to build a team of formal and nonformal environmental educators in your area.

When volunteering your time to support PLT in other ways besides facilitating a workshop please fill out the Sapling Activities Reporting Form found in Appendix C. These additional activities are reported in the annual report sent to the University of Florida/IFAS, the Florida Forestry Association, and the National PLT Office.
Part III: Understand How PLT and the Sunshine State Standards Go Together

**Sunshine State Standards**

The Florida Department of Education has developed SSS and benchmarks for four grade clusters in seven subjects. In addition, the FCAT measures selected benchmarks to assess student knowledge and skill in reading, writing, math, and science, grades 3–10. Teachers use the SSS to guide their lesson plan development, their choice of units, and the content of their teaching. In an effort to make it easier for teachers to implement PLT, the PreK–8 Activity Guide, the Early Childhood Experiences, the Energy and Society Module, and the Urban Forest Supplement are correlated to these standards. The correlations are found at [http://sfrc.ufl.edu/plt/florida_correlations/index.shtml](http://sfrc.ufl.edu/plt/florida_correlations/index.shtml)

During a workshop, facilitators should demonstrate the SSS connections to each activity. Before the workshop, gather the SSS benchmarks that correlate to the theme of the workshop. If the workshop focuses on science, then chose the science standards for the appropriate grades. Or if the workshop is focused on reading, bring the reading benchmarks. See the Combined Projects Facilitator Handbook, pages 15–16, for examples of connecting to activities.

**FCAT-like Prompts***

Many teachers and administrators are concerned that their curriculum prepares students to score well on the FCAT. PLT activities are well suited to assist this goal in several ways:

1. Many PLT activities help students practice reading, writing, and math skills.
2. Most PLT activities address science benchmarks, helping teachers address those standards.
3. All PLT activities have excellent discussion questions that enable teachers to engage students in higher order thinking skills.

In addition, PLT activities can be a springboard to additional exercises that mimic FCAT-type questions.

The following are examples of FCAT-like prompts that were designed for nine PLT activities for reading, writing, and math benchmarks. You can use these in a workshop
to inspire teachers to make similar prompts. Caution them that these prompts did not come from the official Department of Education FCAT office, but are merely examples.

**Grades K-2**

**Adopt-a-Tree (#21)**
1. Compare the class tree to another tree close by. With your partner, write and draw your comparisons.
2. Use your senses to tell about your adopted tree.
3. Estimate the distance around your tree. Tear off a length of adding machine tape that you think would go around the tree’s trunk. How did your measurement compare to others in the classroom? How did your measurement compare to the actual measurement?

**Shape of Things (#1)**
1. Shapes and patterns are found throughout nature. Think of the different shapes you saw on your walk. Write a story about the different shapes you saw.
2. Think about the walk around the school grounds. Then write some things from nature that you saw that were in different shapes.
3. Read *The Shape of Me and Other Stuff* by Dr. Seuss. Now, pretend you are the author. Add another page to this book by describing shapes that you have seen in nature.

**Grades 3-5**

**Name That Tree (#68)**
1. Tree identification requires some investigative work. Explain why specific characteristics of a tree are important to know before you can identify a tree. Use details and information from the text to support your answer.
2. Tree species are unique in that they differ in the shape of their leaves. Compare and contrast two different types of leaves you have seen. Use details and information from the leaves you have studied to explain your answer.
3. Suppose you found the leaf of a sugarberry tree on the ground. Describe this leaf to be sure of proper identification. Use details and information from the article to support your answer.

**Tree Factory (#63)**
1. Each tree part plays an important role in a tree’s growth. Think of ways that tree parts are similar to a human’s body parts. Explain the similarity of a particular tree part to a part of your body.
2. Each part of a tree plays an important role. Think about the part of the tree you became in the activity. Write a story telling about your daily job as an important tree part.

3. The PLT activity suggests that a tree works like a factory. Think of ways that the work of a tree is similar to that of a factory. Explain why a tree is said to perform like a factory.

Grades 6-8

How Big Is Your Tree? (#67)
1. Tree sizes range from small seedlings to magnificent giants. Think about a drawing or painting of a forest landscape containing a variety of trees in all shapes and sizes. Imagine the landscape becomes real and you take a walk through the area. Write a story about your walk describing how the size of the trees seems to change as you walk deeper and deeper into the forest.

2. Locate two different trees outside your classroom. Use a string or tape measure to find the circumference of each tree. Once the circumference is determined, find the diameter of the two trees. Afterwards, check your answers by using the diameter-at-breast-height (DBH) tape.

3. On the way to the park, Jean saw an unusual looking tree and wondered how tall it was. Since it was a sunny day, she decided to measure the length of the tree’s shadow and the length of her own shadow to determine the height of the tree. Explain how Jean could use this method to figure out how tall the tree is.

Tree Cookies (#76)
1. Many things about a tree’s life can be determined while examining the characteristics of a tree cookie. Choose a tree cookie to examine (or visualize) and imagine you are that tree. Write a story about your life as that tree.

2. Select 3–5 tree cookies that vary in size. Estimate and record the circumference, diameter, and area of each tree cookie. Then, use a ruler to calculate the actual circumference, diameter, and area of each tree cookie. When measurements are completed, calculate the estimated and actual average diameter for each tree cookie.

3. Many teachers do not acknowledge the importance of studying about trees. Think of the benefits your history teacher might gain from teaching his/her class about trees. Write to persuade your history teacher to teach a unit on trees to your history class.

Living With Fire (#81)
1. The government allows limited funding for educating the public about fire. Think about a major fire issue you would focus on if your job were to educate the public on fire. Persuade fire officials to support your decision.
2. The author creates an analogy between fire and digestion. Explain the author's interpretation of this analogy. Use details and information from the article to support your answer.

Grades 9-12

Tree Treasures (#12)**
1. Think about the following quote, “ashes to ashes and dust to dust.” Explain how this quote might relate to trees.
2. Many useful items we have today were made from trees. Imagine you are an object made from a tree. Write a story telling how you are used.
3. Inventory the classroom for items made from trees.

Water Wonders (#44)
1. We know that water makes up most of the Earth. Explain where most of the Earth’s water is located. Use information and details from the water cycle picture (page 143 in the PLT guide) to support your answer.
2. Based on the data shown on your Water Cycle Score Card, create a graph representing your journey as a water molecule. (Remember, the variable is on the y-axis.) Be sure to title your graph, label the axis, and graph the information accurately.
3. A single drop of water may have been around for millions of years. Think about ways that water used today could have been used millions of years ago. Write to explain how it is possible that people today are using the same water that was used during prehistoric times.

*All FCAT-like Prompts created by Vicki Crisp, Northeast Florida Educational Consortium, Palatka, Florida.

** Tree Treasures has been integrated into We All Need Trees (#13) in the 2005 and later editions of the PreK–8 Activity Guide.
Part IV: Experience PLT Activities

One key to presenting a balanced workshop and presenting participants with a well-rounded look at the various activities in the PLT PreK–8 Activity Guide or Secondary Modules is to use a minimum of three core activities from the lists below. Activities are the core of the workshop; thus, core activities are the primary components of the agenda.

### Core Activities — preK–8

**Theme: Awareness**
- Invasive Species (#12)
- We All Need Trees (#13)
- Peppermint Beetle (#3)
- Charting Diversity (#10)
- Adopt a Tree (#21)
- Poet-Tree (#5)
- Name That Tree (#68)

**Theme: Knowledge**
- Tree Cookies (#76)
- Birds and Worms (#25)
- Every Tree for Itself (#27)
- Water Wonders (#44)
- Resource-Go-Round (#82)
- Looking at Leaves (#64)
- Living with Fire (#81)
- Make Your Own Paper (#51)
- To Be a Tree (#62)
- Tree Factory (#63)

**Theme: Challenge/Action**
- Viewpoints on the Line (#19)
- 400-Acre Wood (#50)
- Forest for the Trees (#69)
- We Can Work it Out (#56)
- Forest Consequences (#33)

### Core Activities — 9–12

The core activities for the secondary level are in the Introductory Handbook for the Secondary Modules that you can borrow from PLT Central. These are arranged under the five major PLT Themes.

**Diversity:**
- Renewable or Not (p. 26)
- Environmental Exchange Box (p. 32)

**Interrelationships:**
- Trees as Habitats (p. 34)
- Energy Sleuths (p. 36)

**Systems:**
- 400-Acre Woods (p. 42)
- Democracy in Action (p. 50)

**Structure and Scale:**
- Watch on Wetlands (p. 54)
- Waste Watchers (p. 63)

**Patterns of Change:**
- A Look at Lifestyles (p. 70)
- Improve Your Place (p. 77)
Endnotes

Thank you for becoming a PLT Facilitator. You are joining a select group of dedicated educators and resource professionals who help improve the quality of environmental education available to Florida's youth. To help your PLT workshops go smoothly, a variety of forms and supplemental information are available on the following pages. Below is a description of information/materials that can be found in the Appendices.

Appendix A — Workshop Enhancements
This section has supplemental information for workshops—sample agendas for the preK–8 Activity Guide and the Secondary Modules, and questions for Hike through the Guide. Workshop enhancements such as Make and Take ideas, and Trees of Florida are also included in this section.

Appendix B — Workshop Forms
Workshop proposal, facilitator and participant survey/evaluation, workshop packing list, workshop registration and photo release forms, workshop sign-in sheet, and exhibit request forms are found here. These are the most commonly used forms; they are also found on the Florida PLT Web site.

Appendix C — Program Forms
This section includes PLT School and Environmental Education Center applications, the Facilitator Mentoring Criteria and Application, and the Sapling Activities Reporting Form. The PLT Memorial and Recognition Program information can also be found here.

Appendix D — Florida PLT Network Contact List
The final section includes a list of active facilitators, our Steering Committee members, and designated PLT schools and Environmental Education Centers.

If you need assistance or have suggestions for additions to this facilitator supplement please contact the State Coordinator.

Continue to check our web site for updates to this handbook in the Facilitator’s Corner of our web site (http://sfrc.ufl.edu/plt).
## Sample Agenda for preK-8 Educator Workshop

<table>
<thead>
<tr>
<th>Activity</th>
<th>Approximate Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check-in, registration, name tags</td>
<td>8:45-9:00</td>
</tr>
<tr>
<td>2. Welcome; introduce presenters; give brief overview of the agenda</td>
<td>9:00-9:35</td>
</tr>
<tr>
<td>and workshop goals; conduct icebreaker (We All Need Trees)</td>
<td></td>
</tr>
<tr>
<td>3. PLT goals, history, and sponsors. Briefly discuss how PLT meets</td>
<td>9:35-9:50</td>
</tr>
<tr>
<td>participants’ needs. Relate to Sunshine State Standards.</td>
<td></td>
</tr>
<tr>
<td>4. Break</td>
<td>9:50-10:00</td>
</tr>
<tr>
<td>5. Lead selected activities from PLT guide. For each activity match to</td>
<td></td>
</tr>
<tr>
<td>local objectives and ask how participants might adapt activity to</td>
<td></td>
</tr>
<tr>
<td>meet needs</td>
<td></td>
</tr>
<tr>
<td>6. Outdoor: Peppermint Beetle</td>
<td>10:00-10:30</td>
</tr>
<tr>
<td>7. Indoor: Renewable or Not</td>
<td>10:30-11:00</td>
</tr>
<tr>
<td>8. Indoor or Outdoor: Water Wonders</td>
<td>11:00-11:30</td>
</tr>
<tr>
<td>9. Outdoor: Every Tree for Itself</td>
<td>11:30-12:00</td>
</tr>
<tr>
<td>10. Lunch</td>
<td>12:00-12:30</td>
</tr>
<tr>
<td>11. Distribute PLT guide. Do a “hike” through the guide:</td>
<td></td>
</tr>
<tr>
<td>• Point out themes</td>
<td>12:30-12:40</td>
</tr>
<tr>
<td>• Note activity components</td>
<td></td>
</tr>
<tr>
<td>• Demonstrate cross-referencing</td>
<td></td>
</tr>
<tr>
<td>Use discussion format or individual planning sheets.</td>
<td></td>
</tr>
<tr>
<td>13. Break</td>
<td>1:40-1:50</td>
</tr>
<tr>
<td>14. Small groups select and lead PLT activities or share individual</td>
<td>1:50-2:40</td>
</tr>
<tr>
<td>classroom plan.</td>
<td></td>
</tr>
<tr>
<td>15. Wrap-up—evaluation: have participants complete survey forms;</td>
<td>2:40-3:00</td>
</tr>
<tr>
<td>hand out certificates of completion; solicit feedback (Were needs</td>
<td></td>
</tr>
<tr>
<td>met?).</td>
<td></td>
</tr>
<tr>
<td>Thank you to participants and follow-up</td>
<td></td>
</tr>
</tbody>
</table>
A typical agenda allows time to model the activities for the participants, time for questions and potential networking among participants, and time for educators to start thinking how to incorporate PLT into their curricula or programs. It includes a mixture of indoor and outdoor activities. This agenda gives time for these and time for educators to practice doing an activity, as a group, with all participants.

**Sample Agenda for Secondary Module Educator Workshop***

<table>
<thead>
<tr>
<th>Activity</th>
<th>Approximate Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check-in, registration, name tags</td>
<td>8:45-9:00</td>
</tr>
<tr>
<td>2. Welcome; introduce presenters; and give brief overview of the</td>
<td>9:00-9:20</td>
</tr>
<tr>
<td>agenda and workshop goals; conduct icebreaker (Renewable or Not)</td>
<td></td>
</tr>
<tr>
<td>Notes: Find out how much the participants know about PLT. Review</td>
<td></td>
</tr>
<tr>
<td>their comments about the high school audience and relate these to the</td>
<td></td>
</tr>
<tr>
<td>structure of the modules. Explain the mission and goals of PLT and</td>
<td></td>
</tr>
<tr>
<td>the history of the secondary program. Review the components of a</td>
<td></td>
</tr>
<tr>
<td>module; provide an overview of all module topics.</td>
<td></td>
</tr>
<tr>
<td>4. Break</td>
<td>9:50-10:00</td>
</tr>
<tr>
<td>5. Model activities from the identified Module (Example: Focus on</td>
<td>10:00-10:45</td>
</tr>
<tr>
<td>Forests)</td>
<td></td>
</tr>
<tr>
<td>Notes: The two-hour format does not allow much time to model the</td>
<td></td>
</tr>
<tr>
<td>activities, nor does it allow planning time for the educators to</td>
<td></td>
</tr>
<tr>
<td>think about how they will use the material in their classrooms or</td>
<td></td>
</tr>
<tr>
<td>learning environment. When possible, allot more than the minimum of</td>
<td></td>
</tr>
<tr>
<td>two hours.</td>
<td></td>
</tr>
<tr>
<td>6. Wrap-up: Debriefing, questions and answers, and survey forms.</td>
<td>10:45-11:00</td>
</tr>
<tr>
<td>Thank you to participants and follow-up</td>
<td></td>
</tr>
</tbody>
</table>

* Educators must have attended an educator workshop prior to attending a secondary workshop.

Additional sample agendas can be found on our web site in the Facilitators’ Corner (http://sfrc.ufl.edu/plt).
Make and Take Activities

In workshops with ample supplies and materials, educators may want to make and take kits or prepare the materials needed for specific classroom activities. If you plan to have Make and Take, provide a way to have the participants take home their new supplies (e.g., a box, shopping bag, Ziplock® bags). See the Activity Guide for descriptions of the following activities well-suited for make and take.

**We All Need Trees (#13)**
Tree Treasures enrichment option. Have enough magazines and newspaper supplement pages for teachers to make their own Tree Treasure cards. You will need scissors, glue, newspaper, magazines, and index cards or manilla folders.

**Tree Factory (#63)**
Bring manila folders, yarn, and a hole punch for participants to fill out the parts of a tree.

**Peppermint Beetle (#3)**
Provide peppermint extract, cotton balls, and two colors of flagging tape for each participant. Don’t forget bags to put the items into.

**Leaf Hunt Relay**
Have participants make sets of laminated real leaves or leaf prints on cards.

**Water Wonders (#44)**
Bring sheets of paper, and markers or crayons for participants to make the rotation stops. Remember to bring envelopes and copies of the rotation options. You can also create mini water cycles using gallon-size Ziplock® bags, gravel or sand, and permanent markers. Contact PLT Central for directions.

**The Shape of Things (#1)**
Provide cardboard outlines of each shape, construction paper, and scissors to cut out the various shapes. A hole punch is useful for attaching each shape to yarn or string. If a laminator is available, participants can laminate the shapes (before punching holes) for longer lasting props.

**Web of Life (#45)**
Provide wildlife, plant, and insect images. Index cards or manila folders, scissors, glue, pens or permanent markers, scissors, yarn, and newspapers and magazines.

**How Big is Your Tree? (#67)**
Create a personal or class set of diameter-at-breast-height (DBH) tapes to measure the trees. Bring at least one yardstick, a permanent marker, strapping tape, masking tape, and sample DBH tape to use as a model.

**Overheads**
Have participants make overheads for some of the activities. Remember to bring transparency sheets and markers.

*This designates printable pages for these Make and Takes can be found on the PLT web site ([http://sfrc.ufl.edu/plt/resources/index.html](http://sfrc.ufl.edu/plt/resources/index.html)) under “Activity Materials.”*
Hike through the Guide “At-a-Glance”

Tape, clip, or staple this to the back cover of the guide book to help you remember what to cover during the Hike Through the Guide. See next page for details and page numbers.

HIKE THROUGH THE GUIDE TOPICS

COPYRIGHT

INTRODUCTORY PAGES
acknowledgements, more in Appendix 16, p. 451
PLT mission & goals
what is EE? PLT = quality EE
teaching methods & strategies
PLT program overview & network

ACTIVITIES (96)
icons p. 9
activity components p. 10-11
references & resources by activity in Appendix 4 (p. 431)

APPENDICES (16)
glossary
conceptual framework & storylines
Earth & Sky, differentiated instruction
two hats, teaching controversial issues
and much more!

INDICES (7)
subject
grade
time
technology
topic
skills
alphabetical
HIKE THROUGH THE GUIDE

1. COPYRIGHT: Point out that PLT materials are copyrighted and student pages should be copied for classroom use only.

2. INTRODUCTORY PAGES

   A. Pages iv-vii: Opening statements by PLT sponsors, mission, goals, and description of methods used in PLT activities.

   B. Page viii: Description of the activity components.

   C. Pages ix-xi: Storylines: broad generalizations that are supported by many PLT activities. These storylines are suggestions. Teachers may wish to expand on them.

   D. Pages xii-xiv: Acknowledgments of all the people who contributed to the creation of this new guide.

3. ACTIVITIES

   A. Are color-coded by theme: diversity, interrelationships, systems, structure and scale, and patterns of change.

   B. Choose one activity and have everyone turn to that activity. Point out the following components of the activity.

      1) Overview, objectives, and assessment opportunity
      2) Sidebar: levels, subjects, concepts (related to conceptual framework in back), skills (complete listing in the back of the Guide), differentiated instruction and technology connection symbols, materials, time considerations, and related activities.
      3) Background, doing the activity, and safety icons
      4) Variations, enrichment, and reading connections

   C. There are 96 activities in all.

4. REFERENCE PAGES AT THE END OF THE GUIDE

   A. Appendices: pages 421-454

      1) These appendices cover a wide range of issues and topics that seem to occur whenever teachers deal with environmental issues in the classroom.
2) Glossary and PLT conceptual framework. The authors of this guide have put together some insights and suggestions that you may wish to incorporate when you deal with some of these issues in your classroom.

3)Topics covered in the appendices include teaching for conceptual understanding, cooperative learning, roles of environmental educators, teaching controversial issues, multicultural education, working with exceptional students, organizing environmental clubs and outdoor classrooms, and bringing nature indoors.

B. Additional resources: page 444-446

1) Teachers should request information from local sources first before contacting national sources.

2) Emphasize the guidelines for requesting information.

C. Indices: pages 455-470

1) All PLT activities are cross referenced a number of ways to help teachers access information quickly.

2) Subject index

3) Grade index

4) Time consideration

5) Topic index

6) Skills index (This is a list of thinking processes and skills used in PLT activities.)

7) Alphabetical index of activities

1. What are the goals of PLT? [p. 3]

2. What are “invasive species” and where can you find this information? [Glossary, p. 422]

3. Find an activity that addresses the theme of diversity and can be conducted indoors. [“Environmental Exchange Box,” p. 92; found using Index 3: Time Consideration and Setting Index, p. 459]

4. Where can you find information about “Differentiated Instruction”? [Introduction, p.6 and Appendix 7, p. 442] Give an example of how differentiated instruction is used in an activity, and describe the corresponding icon. [“Water Wonders”, p. 188, uses paired/cooperative learning; 2 stick figures]

5. Where can you find information to help evaluate the effectiveness of activities with your students? [See “Assessment Opportunity” next to “Objectives” at the beginning of each activity]

6. Where can you find examples of “storylines”? [Appendix 3, p. 429]

7. What are three teaching methods/strategies used by PLT to guide learners through the process of awareness, understanding, challenge, motivation, and action”? [discussion, brainstorming, and planning; found on p. 5-6, “PLT Teaching Methods and Strategies”]

8. How many activities deal with the urban environment? [19; Index 5: Topic Index, under “Urban Environment,” p. 467]

9. What is the fastest way to find an activity in a particular curriculum area (e.g. math, language arts, science, etc.)? [Index 1: Subject Index, p. 455]

10. Find an activity that involves the skill “estimating.” [Index 6: Skills Index, “Every Drop Counts!” p. 468]

11. What are the 9 items that can be found in the sidebar of the activities? [Levels, Subjects, Concepts, Skills, Differentiated Instruction (not in all activities), Technology Connections (not in all activities), Materials, Time Considerations, and Related Activities; found in Introduction’s “Activity Components,” p. 10]

12. What is PLT’s policy about reproducing/copying materials from the PLT guide? [see inside of front cover]
13. What radio program is embedded into Activity 84? [Earth & Sky] And where can you find additional information about PLT’s partnership with this program? [Appendix 5, p. 441]

14. Where can you find a sample rubric for the third assessment opportunity in “Get in Touch with Trees”? [p. 20, PLT web site at www.plt.org (Go to → Curriculum/PreK-8/Resources for 2006 PreK-8 Guide by Activity)]

15. “Reading Connections” are emphasized in the new guide. Where can you find them? [in a shaded box at the end of each activity] Name one book that you are familiar with.

16. What is PLT’s slogan that sums up how PLT supports quality EE? [“helping students learn how to think, not what to think”, p. 3]
WALK THROUGH THE FOCUS ON FORESTS MODULE

1. Q. Six key benefits from the forests are highlighted in the "Focus on Forests" Secondary Module. Name them.

2. Q. Four important categories of products and by-products from trees are listed in the "Focus on Forests" module activity "What's a Forest to You?" Name these.

3. Q. What are the skills to be learned from activity #5 in the "Focus on Forests" module?
   A. Side Bar. - Page 34.

4. Q. What's the definition of the word "deforestation"?
   A. The permanent removal of trees from a forested area. - Page 53 (Glossary)

5. Q. Where in the "Focus on Forests" secondary module is mention made of a book titled "American Forests, A History of Resiliency and Recovery"?
   A. Appendix 1 - Bibliography. - Page 50.

6. Q. A federal Act designating funds for forestry research at land grant schools and state supported forestry schools was co-sponsored by a famous Mississippi Senator. Who was he?
   A. Senator John C. Stennis. - Page 54 Appendix 3.

7. Q. What percent of the U.S. is still covered by forests?
   A. 32 percent - Appendix 5 pie chart.

8. Q. Who owns most of the timberland in the U.S.?
   A. Non-Industrial Private Landowners (59%) - Page 68.
Project Learning Tree - Reading Connections
PreK-8 Activity Guide

PLT supports the important role that reading plays in the classroom. Activities accompanied by literature provide students with a meaningful way to expand their learning and imaginations, while providing educators with tools to address current education initiatives. Reading connections are a leading feature of this guide. Relevant books are listed at the end of each PLT activity in a highlighted box entitled “Reading Connections.” PLT advocates the use of a wide variety of fiction and nonfiction books including the following:

- Folktales
- Myths and Legends
- Content-based
- Poetry
- Chants and Songs
- Maps and Charts
- Culturally Diverse
- Global in Scope

The books listed at the end of each PLT activity were selected to assist teachers in meeting reading goals and to build upon concepts learned in the activities. Authors, titles, annotations, grade level recommendations, and ISBN numbers are provided for each book. Additional books correlated to each activity, but not noted in the highlighted box, can be found at www.plt.org under the PreK–8 Guide’s resources. There are two lists found at the website; one is categorized by author and the other by PLT activity.

Several PLT activities include a “read-aloud.” Research indicates that reading aloud motivates children to want to learn to read, assists in vocabulary and language development, and increases content knowledge. Reading a story aloud also presents great opportunities for classroom discussions, role plays, shared readings, arts and crafts, and singing songs. In these read-alouds, educators are given additional techniques for effectively expanding upon the reading with their students. In “Trees as Habitats,” for example, Good-Night Owl! is suggested as a read-aloud. Use of this book has been integrated into the activity and discussion questions have been added. Read-alouds include stories for teachers to read aloud or for students to read to one another or to themselves, depending on their grade level. With these stories and the discussion questions provided in the activities, educators can introduce new vocabulary and concepts, expand on content knowledge, and assess student comprehension. PLT
activities that have stories within them include “Sounds Around,” “The Forest of S.T. Shrew,” “Tale of the Sun,” “Nothing Succeeds Like Succession,” “Earth Manners,” and “A Look at Lifestyles.”

Educators may expand upon PLT’s emphasis on reading through the following techniques:

- Students reading aloud to each other.
- Students reading additional books by authors from the “Reading Connections.”
- Older students reading to younger students.
- Students writing new endings to the books or creating new stories.
- Students reading outdoors.
- Students selecting appropriate music to go with a reading.
- Students reading the “Reading Connections” books to their siblings, parents, or grandparents.
## Trees of Florida

<table>
<thead>
<tr>
<th>Tree Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>American beech</td>
<td>Fagus grandifolia</td>
</tr>
<tr>
<td>American holly</td>
<td>Ilex opaca</td>
</tr>
<tr>
<td>Baldcypress</td>
<td>Taxodium distichum</td>
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<td>Basswood</td>
<td>Tilia americana</td>
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<tr>
<td>Black cherry</td>
<td>Prunus serotina</td>
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<tr>
<td>Black ironwood</td>
<td>Krugiodendron ferreum</td>
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<tr>
<td>Black mangrove</td>
<td>Avicennia germinans</td>
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<td>Bluejack oak</td>
<td>Quercus incana</td>
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<td>Bluff oak</td>
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<tr>
<td>Buttonbush</td>
<td>Cephalanthus occidentalis</td>
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<tr>
<td>Buttonwood</td>
<td>Conocarpus erectus</td>
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<tr>
<td>Cabbage palm</td>
<td>Sabal palmetto</td>
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<tr>
<td>Carolina willow</td>
<td>Salix caroliniana</td>
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<td>Chapman oak</td>
<td>Quercus chapmanii</td>
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<tr>
<td>Dahoon holly</td>
<td>Illex cassine</td>
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<tr>
<td>Eastern redcedar</td>
<td>Juniperus virginiana</td>
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<tr>
<td>Elderberry</td>
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<tr>
<td>Fiddlewood</td>
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<tr>
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<td>Eugenia axillaris</td>
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<td>Ulmus alata</td>
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<td>Yaupon holly</td>
<td>Ilex vomitoria</td>
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</tbody>
</table>

For additional information on trees, plants, and ecosystems in Florida visit the Florida 4-H Ecology Web site at Http://www.sfrc.ufl.edu/4h.