

# **Alignment of Project Learning Tree with Levels PreK-8 of the Vermont Framework of Standards and Learning Opportunities**

**PROJECT LEARNING TREE-Supplemental Curriculum Materials  
(Activity Guide, 402 pp.)  
American Forest Foundation, 1994**

## **Learning Opportunities and Vital Results**

**Introduction to Project Learning Tree-**Project Learning Tree (PLT) is an interdisciplinary environmental education teaching supplement. It is one of the oldest and most widely-used curriculum supplements for EE. It is available in all 50 US states and several foreign countries through 6-hour facilitator-led workshops for educators. In Vermont, the materials are generally distributed free to participants. An educators guide containing 96 written activities is the basic curriculum piece. While there are some pages meant to be copied and distributed to students, PLT is not designed be used as a student textbook. In addition to the activity guide, Vermont educators receive a packet of materials meant to complement the guide with activities, background and resources related to Vermont and New England.

Because they are so diverse, the reviewer looked at all activities, not a sampling. The rating is based on the system used for curricula reviewed by the Vermont Institute for Science, Math and Technology (VISMT) for the Learning Opportunities, Vital Results and Fields of Knowledge for SMT-related fields. The PLT Educators Guide was reviewed by Ginger Anderson, State Coordinator for PLT in the fall of 1996. Any questions regarding the review or the materials themselves can be addressed to Ginger Anderson, VT Dept. of Forests, Parks, and Recreation, 103 South Main St., Waterbury, VT 05671-0601 (Tel: 802-241-3651, VT TDD 1-800-253-0191)

## **Part I: Learning Opportunities-Instructional and Assessment Practices Review**

Rating scale:

- 1 Nonexistent (or not applicable)
- 2-3 Poorly implemented or inconsistent
- 4-5 Consistent

**(ACCESS)**

### **Equity**

**4**

Names in stories in the PLT Guide reflect both genders and some ethnic minorities; activities include exploration of other cultures and life conditions in other countries and cultures. Few photos or drawings are of people, but both genders are represented in both graphics and text

discussions. No handicapped individuals are pictured, but limited teacher's guidance is included in an appendix for both "exceptional" learners and multicultural students. Diverse religions or sexual orientations are not discussed.

**Content and Resources** **4**

The information in this and companion documents assessing PLT alignment will help instructors to make decisions on the value of this materials content for students. It is accessible to students of all abilities and allows for the exercise of concepts and skills outlined in Vermont's Farmework. It is not meant to be the only resource teachers can use for the enrichment of Environmental Education in their classrooms. There is a strong and varied bibliography of **Resources** in the Guide to assist educators in the location of related materials.

**Time** **3**

PLT offers educators an estimate of time needed for preparation and teaching of each level. The time varies from one class period to an entire school year. This is an estimate only, and in some cases, may not be realistic. There is no explanation of the target age group in reference to the time estimates. Some lessons may lend themselves well to block scheduling, while others do not unless used in conjunction with other materials.

**(INSTRUCTION)**

**Thematic (Setting the Stage or Context)** **1**

(Not really applicable as rated by VISMT, as these are not student materials, although there is a thematic overview for teachers at the beginning of each activity. The overview does not link multiple lessons, but it does summarize the activity. Teachers who use the Conceptual Framework or have a theme of their own will be able to set or maintain the context for their students.)

**Linking Strategies** **4**

The 5 major themes of PLT, storylines connected to each other, and the activities link to support the individual themes, yet can stand by themselves. These further support the overarching theme of using forests to appreciate our natural resources. The PLT Conceptual Framework illustrates the links clearly. Because the educator must select the activities in a comprehensive order to make the linkages of the themes work, the links could be lost or muted if only a few activities are used.

**Scaffolding** **1**

Because it is supplemental, educators must be able to use each activity as a contained unit, with or without other activities from the guide. This precludes scaffolding, although a educator can take the lessons with multiple enrichment pieces and construct their own on an issue such as forest health or forest habitats, or by using headings from the topic index.

### **Prompts for Support of Positions**

2

Some activities include prompts, but they are limited to that activity (not carried throughout the Guide), and are minimal at best, especially at the lower grade levels. The activities tend to try to help students formulate opinions rather than support existing ones.

### **Multiple Learning Strategies**

5

As supplemental material, learning strategies not always found in basic curricula are featured in PLT. The materials make good use of outdoor learning opportunities, and include many indoor activities as well. The major weakness of all supplemental materials is that teachers will rarely use every lesson or activity. Project Learning Tree presents opportunities for multiple strategies that include art and writing projects, community service, personal interviews, field trips, mapping and design activities.

### **Extension and Refinement of Learning**

4

PLT encourages ample use of open-ended questions by the educator and by the students. Each activity includes an extension, enrichment piece or related activities. The Vermont supplements to PLT also give a local or regional view and activity suggestion. No extensions are given to other curricula or activities outside of PLT and selected references. The materials include questions, opportunities for further research and projects that can extend their activities into local questions, related areas and other fields.

### **Resolve Misconceptions**

4

Only one activity clearly states a misconception and suggests a way to resolve, but questions for the teachers to raise during other activities do elicit responses that may reveal misconceptions. Several activities deal with environmental issues about which misconceptions are common.

### **Multiple Perspectives**

3

This is a hard area for many curriculum supplements. PLT tries to provide multiple perspectives at the individual activity level. The materials stress the development of critical thinking skills, but the examples and overall tone tend to lean towards those of natural resource management, as

this is a core tenet of the program. There are good representations on selected topics of geographical (other countries) and cultural perspectives.

**Multiple Roles for Teacher and Students** **4**

In much of the PLT materials, the teacher is present as a facilitator. Because the materials are used by youth groups, home schools, and at a variety of grade levels, the role of the instructor is most active in describing the activity. Students are asked to lead discussions and take on various other roles. Indeed, role-playing is a learning device incorporated into several of the activities. In some of the activities, the instructor may be asked to role-play as well as the students, and the teacher as co-learner is apparent in some.

**Reflection** **4**

The guide has activities that ask students to write poems and letters, interview community members and form their own beliefs on several topics. Music, art and movement are included in selected activities. Students are asked to reflect on the results of both their research and experimentation.

While the use of reflection is good, there are a couple of lessons that incorporate techniques often associated with “guided imagery” which will not be seen as an appropriate technique in many classrooms.

**(ASSESSMENT)**

**Varied and Appropriate Assessments** **3/4**

Each activity concludes with advice to the instructors on methods for assessment of students. While there is considerable variation in both the activities and the assessment recommendations, but there is room for expansion of assessment techniques on most. There is little discussion of student-based assessment.

**(CONNECTIONS)**

**Real World Connections/Relevance** **5**

This may be the strongest point of the materials; encouraging students to explore the natural world and design answers to local environmental challenges. Students are encouraged to publish documents, and write letters on behalf of environmental issues. They can plant trees, collect recyclables, and measure their own family’s water use. The use of evidence students gather through research and experimentation helps refine these connections. The Vermont supplements also provide real, local connections for some activities.

**Interdisciplinary Connections** **4**

The best connections within the Fields of Knowledge seem to be among elements of the Science and Technology standards and History and Social Science standards. There are solid connections with math (Investigations, Measurement Concepts) and History and Social Sciences (Historical Connections, and Geographical Knowledge) as well.

Alignment/connection with Vital Results elements are detailed a separate document.

**Collaborative Work** **5**

Some of the PLT exercises are meaningful *only* if done in a collaborative setting. The collaborative work is done in pairs, small and large groups. Some activities ask for collaboration or at least participation from people outside the classroom such as family and community members.

**Part II: Vital Results Standards**

**(COMMUNICATION)**

**Reading** **4**

Both in terms of readings contained in the book, and research/suggested readings for selected lessons, PLT encourages reading for understanding and following instructions. Readings are varied, although all are linked to environmental themes and utilize several media (fiction, folklore, poetry, news, speeches). Activities incorporating reading skills are strongest in those designed for grades 4 and up.

**Writing** **4**

PLT activities include writing on different levels for different purposes; poetry and letter composition, essays, reporting and explaining. PLT does not deal with writing conventions, but does stress whole language learning. Persuasive writing and “storyboard” are included.

**Listening** **4**

Several PLT activities incorporate listening skills, including listening to sounds, music, poetry and stories.

**Oral Expression** **4**

Opportunities are given for oral expression in selected activities; most tend to be question/answer rather than individual orations except in the collaborative activities.

**Visual Expression** 4

Many activities use demonstrations, creating or locating pictures or acting as learning tools, particularly in the younger grade level materials.

**Information Technology** 2

PLT could better utilize opportunities for information technology . The materials do include some design and technology as they relate human use of resources. Aside from student use of graphs and charts and library resources, there is little opportunity to express data and ideas through different types of technology in the activities. This is one area where supplements are needed to extend the value of the Guide.

**Questions/Problem Solving** 4

PLT Learning opportunities include activities in which students pose and answer questions on issues, lifestyles or government processes. Students are encouraged to ask reflective questions, judge evidence and evaluate the opinions of others. Instructors are encouraged to use questioning as a way to clarify, stimulate thinking and assess learning. Some of the questions/problems presented are ones to which there are no “real” answers, but which the thought going into them is more important.

**Solve Increasingly Complex Problems** 3/4

Like scaffolding, this can be difficult for supplementary materials as discrete activities. PLT materials aren’t “stepped” to be increasingly complex, but the enrichments contained in the activities offer opportunities to examine environmental problems in either broader or more complex ways. Because some activities are written for multiple grade levels, several levels of complexity for one topic are often presented.

**Creative Thinking** 5

PLT stresses the importance of critical thinking skills; how to think, not what to think. By use of role playing, games and simulations, there are a variety of ways for students to develop these skills. Some of the collaborative activities are centered around planning, organizing and presenting ideas.

**Devise and Test Ways of Improving a System** 4

Several PLT activities ask students to use their school, community, or even a tree or log as a microcosm of the world, an environment or ecosystem and devise ways to reduce pollution, energy loss or waste, or to measure changes and reflect on processes. One of the over-arching themes is “Systems,” and several are presented here. While PLT is not an activists guide, it does promote movement from awareness to understanding to action on environmental challenges, with improvement the ultimate goal.

**Worth and Competence** **3**

Not well developed on an individual level. Does stress respect for the ideas of others and of course, for the environment. PLT also tries to convey that students (young people) can make a difference in the solution of environmental problems.

**Support Healthy Choices** **3**

A few lessons are suggested for Physical Education, one includes nutrition and another the human health risks of air pollution, but by and large, health issues are not featured in these materials. Suggestions for personal health are not mentioned at all.

**Work in Groups** **5**

(See collaborative work)

**Informed Decisions** **4**

Helps to identify information sources, and processes for making personal and community decisions on environmental issues.

**Economics** **3**

A surprising number of activities reference economic institutions, choices or standards that relate to the environment, including but not limited to personal consumption and use.

**Protect and Repair the Environment** **5**

This is the major focus of the materials, stressing understanding and appreciation *before* action, but with suggestions for activities to repair or protect environmental values.

**Teamwork/Conflict Resolution/Responsibilities** **4**

As stated before, many of the activities take a collaborative approach which require pairs and groups to arrive at a solution or result. Because environmental issues often deal with conflicts between groups, several activities model the types of conflicts that arise during these issues and

ask students to role play or report from a defined perspective. Personal and collective responsibility for the environment is stressed.

**Gain Knowledge of Various Careers** **3**

One entire activity is devoted to careers in natural resources. The activity is limited in the scope and types of careers portrayed. No mention of preparation for those careers is given. Several other activities refer to professionals working in natural resource fields. (Note: information on careers in forestry is available from the VT PLT coordinator upon request.)

**Community Service** **4**

Several activities involve learning about and participating in community service projects and programs related to the environment.

**Human Diversity** **4**

Activities emphasize the diverse ways in which humans around the world view, use and appreciate their forests. A map supplement that shows the forests of the world is also available from PLT. Participants in PLT come from all of the US states, Canada, Mexico, Japan, Germany, Finland, Sweden and Brazil. The need for multicultural materials to serve such a broad audience has made the program more sensitive to diversity issues on an international scale as it relates to resource issues.

**Change** **5**

*Patterns of Change* is a major theme of the PLT materials. Forest resources present many good examples of change over time, distance, space, climate and edaphic factors as well as cultural and human uses and perspectives.