



## ***Appendix C: Sample Workshop Agendas***

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This appendix contains sample agendas that you can use to plan and conduct your workshop.

- **Six and a half hour PreK-8 Workshop**
- **Six-Hour PreK-12 Workshop** with an awareness-to-action storyline
- **Six and a half hour PreK-8 Workshop** that focuses on energy
- **Multi-Session PreK-8 (focus on middle school) Staff Development Workshop** on the topic of natural resources
- **Multi-Session PreK-8 Workshop on a Special Topic** - technology and EE
- **Two-Day Workshop on a Special Topic** - recycling and municipal solid waste
- **Two-Hour Secondary Module Workshop** on *Municipal Solid Waste*
- **Three-Hour Secondary Module Workshop** on *Places We Live*
- **Seven-Hour Secondary Workshop** on PLT and Biofuel Research
- **Three-Hour Secondary Module Workshop** on *Places We Live* and *Focus on Risk*
- **Fifteen-Hour, One Credit PreK-12 and Fire Workshop**
- **Six and a half hour Early Childhood Workshop**
- **One-Hour Secondary Session at a Conference** that focuses on English language learners and *Municipal Solid Waste*
- **One-Hour Session on Reading Connections** for a conference or part of a PreK-8 Workshop
- **Week-Long Teacher Institute** – FIT (Forest Institute for Teachers)
- **PLT embedded into Preservice Syllabus**



**Banshee Reeks Nature Preserve  
December 6, 2006**

**Project Learning Tree  
PreK-8 Workshop**

**Project Learning Tree**  
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**Mission of PLT**

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.

**Goals of the PLT Program:**

- Provide students with the awareness, appreciation, understanding, skills, and commitment to address environmental issues.
- Enable students to apply scientific processes and higher order thinking skills to resolve environmental problems.
- 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.
- Encourage creativity, originality, and flexibility to resolve environmental problems and issues.
- Inspire and empower students to become responsible, productive, and participatory members of society.

**Goals of the Workshop:**

- Share with participants how to use the PreK-8 PLT Environmental Education Activity Guide
- Participate in selected PLT Activities
- Develop an implementation plan to add PLT activities into your program
- Learn about the programs of the Banshee Reeks Nature Preserve
- Background information on the natural resources of Virginia

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**Agenda:**

- 9:00 Goals of Workshop
- 9:15 PLT Introduction and Background Information  
Activity: Activity 63: Tree Factory  
Activity Components: What is in a PLT Activity? (Intro pages 10-11)  
Activity 5: Poet Tree
- 10:45 Outdoor Activities (Nature Deficit – page 5)  
Activity 27: Every Tree for Itself  
Activity 67: How Big is Your Tree?
- 11:30 How to Use PLT Correlations and Virginia SOL's  
Using the "Lesson Planning Worksheet" (Pages 470-471)
- Noon Lunch
- 12:30 History of Preserve – Director of Banshee Reeks
- 1:00 PLT – The Next Generation  
Reading Connections (Intro pages 7-8)  
Activity 8: The Forest of S.T. Shrew  
Review of Literature Books on Resource Table  
Technology Connections (Intro pages 8-9 and Appendix 8)  
Activity 84: The Global Climate
- 1:45 Outdoor Activity  
Differentiated Instruction (Intro pages 6-7 and Appendix 7)  
Activity 44: Water Wonders  
Activity 23: The Fallen Log
- 2:45 PLT Professional Development and Curriculum Connections (Intro p. 12-14) Powerpoint  
- PLT Website: [www.plt.org](http://www.plt.org)  
Earth & Sky  
Urban and Community Forestry  
GreenWorks!
- 3:00 Small Group Discussion Questions
- 3:20 Evaluation – Thanks for participating!!

**Small Group Discussion:**

How can PLT be integrated into your school program?

What additional EE resources would be helpful to you?

What possible GreenWorks! projects might you propose for your school or community?

**For further information on Banshee Reeks visit:** <http://www.bansheereeks.org/>

**For further information on PLT visit:** [www.plt.org](http://www.plt.org)

**For further information on Virginia PLT visit:** [www.cnr.vt.edu/plt](http://www.cnr.vt.edu/plt)

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## PROJECT LEARNING TREE WORKSHOP

### Theme

“Taking Action for Trees in Our Community”

### Awareness

*(building an awareness of trees)*

(Ambience)

The site – Posters, books, etc.

(Icebreaker)

Introductions: “Fond tree memory”  
Orientation to site/workshop goals

(Speaker)

Chris Nelson, Institute of Forest Genetics, USDA-Forest Service

(Discussion)

What is PLT and what are PLT workshops?

### Knowledge/Skills

*(developing knowledge and understanding of trees)*

(Discussion)

Environmental Education (EE): PLT’s role  
How is PLT involved in educational reform efforts?

(Activities)

Sample several PLT activities to demonstrate:  
*Constructivist and thematic approaches; and an emphasis on skills building, cooperative learning, and a hands-on approach*

PreK-3:

Shapes of Things (1); Adopt a Tree (21);  
Looking at Leaves (64); Pass the Plants, Please (16);  
To Be a Tree (62)

4-8:

Closer You Look (61); Tree Cookies (76)  
Name That Tree (68); Trees in Trouble (77)

9-12

What’s a Forest to You (1); Cast of Thousands (2)

(Debrief)

Report back about activities

(Activity)

Hike through the PLT PreK–8 Guide

(Activity)

Additional Activities: divide into small groups and find another activity that would support exploration of role of trees in our community

(Resource Sharing)

Additional contacts, references (from participants and leader), and additional PLT resources (PLT website; Resources by Activity web pages; Earth & Sky; Urban Forestry Web Resource; Every Student Learns Outside Initiative; and *Branch* newsletter)

### Challenge

How can I use PLT? Group planning time.

### Action

*Taking Action*: an introduction to PLT’s “Greenworks!” Program  
And other “action” opportunities – celebration and certificates

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May 16, 2007  
PLT Energy  
PreK-8 Workshop

- 9:00 Welcome, Introductions
- 9:15 Icebreaker Activity: Renewable or Not
- 9:30 Go Over Agenda, Goals (why are you here?), PLT Goals
- 9:45 History of PLT
- 10:00 Activity: Energy Detectives
- 10:15 Dancing with Billy B.
- 10:30 A Hike Through the Guide(s)
- 10:45 Activity: May the Source Be with You
- 11:15 Energy and Society kit
- 11:30 Activity: Energy Chains
- 12:00 Lunch**
- 12:30 Activity: Water Wonders
- 1:00 Dancing with Billy B.
- 1:15 PLT and Curriculum Planning (Use PLT Lesson Planning Worksheet)
- 2:00 Activity: In the Driver's Seat
- 2:30 PLT Resources (Correlations to National and State Standards; Earth & Sky correlations; PLT Website; *Branch* newsletter; Every Student Learns Outside™; etc)
- 3:15 Evaluation/Wrap Up

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## Middle School All-Staff PLT Workshop

### Session I

- 1-3 PM Introduction to PLT –(use PowerPoint)  
Try out 2-3 middle school PLT activities, including: “Renewable or Not” (Popcorn Generation)  
Overview of PLT’s secondary program materials; Survey of interest

### Session II

- 1 PM All “Few of My Favorite Things” (#15-page 75)  
*Icebreaker: Have items on each table that link to the other activities* *Question: How have these items impacted renewable/non-renewable natural resources? Discuss - brainstorm*  
*Question: Where does [school’s name] water and energy come from? Where does our waste go?*
- 1:15-2:15 Overview of workshop: Describe that we are providing “ideas” of how PLT activities can provide links to study/research of their “problem” as a way to introduce the PLT program.
- Break into Three “strands” (**waste, water, energy**)  
Purpose: teams see how PLT can be used to develop “awareness to action” – thematic units; Point out how activities 1) are multidisciplinary; 2) incorporate differentiated instruction, and 3) connect to reading and technology
- WASTE STRAND: “Resource Go Around” (#82); “Reduce, Reuse, Recycle (#37); “Make Your Own Paper” (#51)  
WATER STRAND: “Water Wonders” (#44); “Every Drop Counts” (#38); “Watch on Wetlands” (#71)  
ENERGY STRAND: “In the Driver’s Seat” (#85); “Energy Sleuths” (#39); “Waste Watchers” (#73)
- 2:20-2:30 Debrief (each group reports out)
- 2:30-2:45 “Hike through the PreK–8 Guide”
- 2:45-3:00 Assignment: teams scope out what PLT activities they can use and each teacher tries out an activity before next meeting.

### Session III

- 1 PM Icebreaker: “Viewpoints on the Line” (#19)
- 1:15 Review of activities from Session II; Did they use others? How did the various disciplines get integrated?
- 1:45 “The Global Climate” (# 84) – and Introduction to Earth & Sky partnership
- 2:15 Additional PLT resources: PowerPoint presentation on PLT website, Resources by Activity pages, GreenWorks!, Urban Forestry Web Resource, Every Student Learns Outside Initiative, and Branch Newsletter
- 2:45-3:00 Questions, Evaluations, and Certificates

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## **Integrate Technology & EE into Your Classroom with Project Learning Tree**

### **Day One**

- 4:00-4:30 Introductions – Icebreaker
- 4:30-5:00 Overview of PLT/Distribute Guides
- 5:00-5:30 Hike through the Guide  
Tech in PreK–8: Tech Connections in Activities; Earth & Sky; Urban Forestry Web Resource
- 5:30-6:15 Activity: The Shape of Things (#1)  
Technology Connections: Spreadsheet; Graphic Organizer; Digital Camera
- 6:15-7:00 Lead activity: Can It Be Real? (#11)  
Technology Connections: Presentation Software; Internet Resources; Earth & Sky radio show

Homework assignment: Choose two PLT activities that incorporate technology and conduct them in your class. Be prepared to report back on Day Two.

### **Day Two**

- 4:00-4:45 Report back on homework assignment
- 4:45-6:30 Overview of PLT activities & Technology Connections (Tree Factory #63, Power of Print #59, and The Global Climate #84)
- 6:30-7:15 Additional PLT resources: PLT website; Resources by Activity webpages; Every Student Learns Outside; GreenWorks!; and the *Branch* newsletter
- 7:15-7:30 Q/A, evaluations, certificates.

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A PreK-12 2-day Waste & Recycling Workshop for one Continuing Education Unit



August 14 & 15, 2007

Republic Services of NC, Material Recovery Facility (MRF)  
Conover, NC

**Where is "Away"??  
Exploring Environmental Issues: Municipal Solid Waste  
Project Learning Tree PreK-12 Workshop**



**AGENDA**

August 14<sup>th</sup>

8:30 a.m. Welcome and Introductions (recycling icebreaker)  
#14 Renewable or Not? (PreK-8 Guide)  
#83 A Peek at Packaging (PreK-8 Guide)  
One group tours MRF; other Hikes through the PLT Guide, then switch

Noon LUNCH! and RE3.org and Recycle Guys Program Overview

1:00 p.m. Let's Continue:  
#4 Composting and Vermicomposting (MSW Module)  
Successful Composting presentation – Brian Rosa  
Make vermi-bins to take home!  
#3 Recycling and Economics (MSW Module)  
North Carolina Facts & Figures – Kelley Dennings  
#37 Reduce, Reuse, Recycle (PreK-8 Guide)  
  
School Recycling Programs – Kelley

4:00 pm Wrap Up: Tomorrow's schedule, questions, comments

August 15<sup>th</sup>

8:00 a.m. Good Morning!  
#6 Landfills (MSW Guide)  
Catawba County's Landfill and future EcoCenter  
Amanda Kain – Catawba County Waste Reduction

9:30 a.m. Tours of Landfill, Recycling areas, methane recovery facility, green power lumber facility, and future EcoCenter facilities/programs

11:30 a.m. Return to Republic MRF  
Wrap-up, comments, questions, evaluations, certificates, credit forms

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# Municipal Solid Waste Workshop

## Agenda

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- I. Welcome and Introductions
- II. PLT History, Mission, and Goals
- III. Icebreaker – Environmental Bingo
- IV. Why Study Solid Waste?
  - Everyone creates waste – ask participants “What types of waste do you generate?”
  - Waste creates potential health hazards and environmental problems
  - Connections with products purchased, use of natural resources, and waste generated
  - More informed citizens have potential to develop better solutions to our waste problems
- V. Activity #1, Part A – Waste Not, Want Not
- VI. Enrichment #1, The Throw Away Quiz (Appendix 4)
- VII. Activity #6, Part B – Siting a Landfill
- VII. A Hike through the Guide
- VIII. Activity #3, Recycling and Economics
  - Overview of the activity and discussion of local recycling efforts
- IX. Time for small group discussions of how they will use the module –  
PLT Lesson Planning Worksheet
- X. Additional PLT Resources: Website, Earth & Sky Correlations, Branch Newsletter
- XI. Wrap-up, Questions, Evaluations, Adjourn

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**American Canyon Middle School  
December 13, 2006**

***Exploring Environmental Issues:  
Places We Live Workshop***

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**Goals of the Workshop:**

1. Provide an introduction to the *Places We Live* secondary module
2. Conduct sample *Places We Live* activities and develop an implementation plan

**Goals of the PLT Module:**

1. To give students skills and knowledge to be active participants in shaping their community;
2. To connect students to the places they live (or highlight that connection) so they will care about and influence the decisions being made about those places;
3. To give students an awareness of environmental, social, and economic issues connected to community growth and change;
4. To give students an awareness that their choices impact the environment and the quality of life in communities near and far.

**Agenda:**

- 1:00-1:30 Welcome/Introductions/What's PLT?  
1:30-2:00 Icebreaker- Activity 1: Personal Places  
2:00-2:15 Overview of Places Module  
2:15-2:45 Activity 2: Community Character (and Community of Choices DVD)  
2:45-3:15 Activity 3: Mapping Your Community through Time  
3:15-3:30 Activity 5: Green Space overview (and connection to Earth & Sky)  
3:30-3:45 Additional PLT Resources: PLT website, Resources by Activity webpages, Urban Forestry Web Resource, Every Student Learns Outside Initiative, GreenWorks!, and the *Branch* newsletter  
3:45-4:00 How will you use Places?; Questions; Evaluations; and Certificates

Visit PLT's website for more information at: [www.plt.org](http://www.plt.org)

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**REFINING TREES**  
**Presented by Project Learning Tree (PLT) and**  
**University of Maine – Forest Bioproducts Research Project (FBRP)**

**A Secondary Workshop**

*Workshop Objective: Teachers will learn about current alternative biofuel research under development at the University of Maine and connect this information to their science, math, and technology curriculum using Project Learning Tree and other related curriculum materials.*

8:00 am

- Open for Registration
- Pick a Random Number for Learning Station Assignment (Task is to visit assigned learning station, review activity, and formulate ideas on how you would integrate into your curriculum. At the end of the workshop be prepared to make a brief presentation on how you would use this displayed activity in the classroom)
- Visit other Learning Stations

9:10 am

- Introductions
  - Facilitators
    - Pat Maloney, Maine Project Learning Tree
    - Don Sprangers, Washington Academy
    - Kenneth Laustsen, Maine forest service
  - Attendees

9:25 am

- The Decision Making Process: How do we make decisions about environmental issues? A look at values & consequences associated with change – Don
- Activity #6 – Weighing the Options: A Look at Tradeoffs, Part B (*Exploring Environmental Issues: Focus on Risk*) “The Great Debate: Cost/Benefit Analysis” – Ken

9:45 am

- Activity #2 – Cast of Thousands (*The Changing Forest: Forest Ecology*)- share PLT resources by activity webpages
  - FIG – setting up a forest inventory plot, layout, data forms, tools, data collection, data entry, current participants – Don
  - LMS – Computer simulation of FIG data into future, adding harvest, determining changes in growth and composition - Ken

10:45 am

- Break – Visit Learning Stations (remember your assignment)

11:00 am

- Energy Sleuths – Introductory Handbook for Secondary Modules, pg. 36 (or PreK-8 Guide, Activity 39)– Ken

11:30 am

- Dave Wilby, Executive Director, Independent Energy Producers of Maine, guest speaker, approx. 20 minute presentation and 20 minute Q&A session.

12:10 pm

- Lunch

12:40 pm

- Batching Biodiesel in the classroom – Don

1:10 pm

- Appendix 8, Exploring Environmental Issues: Focus on Risk, pg. 216, “The Count of Monte Carlo” – Ken

1:40 pm

- Dr. Hemant Pendse, guest speaker from UME – FBRP, approx. 20 minute presentation and 20 minute Q&A session.

2:20 pm

- Break – Visit Learning Stations

2:30 pm

- Attendees report on assigned Learning Station
- Closure – Reflections on values, getting informed, and confirming benefits

## **Learning Stations**

1. Batching Biodiesel – How to (Don)
2. Activity #2 – Cast of Thousands (*The Changing Forest: Forest Ecology*) – Tree soup – indoor inventory sampling of the forest and calculating the composition (Ken)
3. Activity #5 – Waste to Energy (*Exploring Environmental Issues: Municipal Solid Waste*) (Ken)

### **Facilitators:**

Ken Laustsen, Biometrician, Maine Forest Service xxx-xxx-xxxx [ken.laustsen@maine.gov](mailto:ken.laustsen@maine.gov)

Don Sprangers, Science Teacher & Envirothon Coach, Washington Academy  
[d.sprangers@washingtonacademy.org](mailto:d.sprangers@washingtonacademy.org)

Patricia Maloney, Coordinator, Maine Project Learning Tree xxx-xxx-xxxx [meplt@gwi.net](mailto:meplt@gwi.net)

### **Speakers:**

David Wilby, Executive Director, Independent Energy Producers of Maine

Dr. Hemant Pendse, Chair – Department of Chemical and Biological Engineering, FBRP  
Managing Director, University of Maine

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A 3-hour secondary workshop on  
*Places We Live and Focus on Risk*



March 5, 2007  
Towson University  
PLT Secondary Workshop

*Exploring Environmental Issues: Places  
We Live  
and  
Exploring Environmental Issues:  
Focus on Risk*

**Goals of the Workshop:**

1. Provide an introduction to the *Places We Live* and *Focus on Risk* secondary modules.
2. Conduct sample activities and consider an implementation plan.

**Goals of the Places module are to help students:**

1. Gain skills and knowledge to be active participants in shaping their community.
2. Connect to the places they live (or highlight that connection) so they will care about and influence the decisions being made about those places.
3. Become aware of environmental, social, and economic issues connected to community growth and change.
4. Become aware that their choices impact the environment and the quality of life in communities near and far.

**Goals of the Risk module are to help students:**

1. Understand how risk is defined by risk assessors.
2. Understand how risk is evaluated, communicated, and perceived by experts and lay people.
3. Understand that risk is a part of everyday life.
4. Begin to identify risks, costs, and benefits associated with environmental issues.
5. Understand the basics of risk assessment.
6. Apply critical thinking skills to real-world choices and policies.
7. Recognize the important role that risk plays in developing environmental policy, U.S. policy in general, and personal risk decisions.

**Agenda:**

- |            |   |
|------------|---|
| 12:00 p.m. | Welcome/Introductions                                   |
| 12:15 pm.  | Icebreaker (Places- Activity 1: Personal Places)        |
| 12:45 p.m. | Overview of PLT Secondary Modules                       |
| 1:00 p.m.  | Places- Activity 2: Community Character                 |
| 1:30 p.m.  | Places- Activity 3: Mapping Your Community through Time |
| 2:00 p.m.  | Risk- Activity 1: What is Risk?                         |
| 2:25 p.m.  | Risk Module Overview                                    |
| 2:30 p.m.  | Risk- Activity 2: Things Aren't Always What They Seem   |
| 2:50 p.m.  | Questions and Evaluation                                |

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Project Learning Tree 15-hour, 1 Credit Workshop (PreK-12 and Fire)

Friday

- 4:00 Sign in, make name tags, mingle, welcome  
Icebreaker (**We All Need Trees** - #13)--**SK**  
Introductions (including discussion of how we teach/learn about the environment, and what makes up a good EE activity)  
Overview of PLT–Objectives, History, Sponsors--**MY**
- 4:45 **Adopt-A-Tree** (#21)--**MY**
- 5:20 Distribute Activity Guides/Modules and sticky notes  
Window shopping (a couple minutes to look through the guide)  
Open the guide to p. 97, Adopt a Tree  
*How might you use this activity with students?*  
*What materials do you need? What subjects does the activity use?*  
*What grade levels? What skills?*  
*How might you modify the activity for your students?*  
*How would you assess student work?*  
Review of PLT activity components  
#, name, overview, sidebar (note icons for technology, diff. instruction),  
background, “doing the activity,” assessment, reading connections, student page,  
related activities (in sidebar)  
Look up two “Related Activities.” (Show them the alphabetical index.)  
In small groups, share what you found. (Describe the activities, how they relate to this one, etc.)
- 5:45 **Poet-Tree** (#5) --**SK**  
*Read from [Insectlopedia](#). Also highlight technology connection with use of slides.*  
*Brainstorm about other media that could be used.*
- 6:15 DINNER
- 6:45 **Tree Factory** (#63)--**SK**  
*Review content-oriented sections of the activity guide/module. Background, glossary, and topic index. Go to [PLT’s PreK-8 Guide Resources by Activity webpages](#) and review [Urban & Community Forestry website connections to this activity](#).*  
Find some activities of interest from the *topic index*. Look them up, tab them, or make a list. Share with people around you.
- 7:15 **Tree Cookies** (#76)--**MY**  
What kind of information would you need to feel comfortable doing this activity with your students?  
Where can you find that info? *Appendix 4, 5, 6, and 9. [PLT/IFPC office and websites](#), [agencies](#), [businesses](#), [local info and publications](#), etc.*
- 8:00 BREAK
- 8:15 **Every Tree for Itself** (#27)—**SK**  
*Go to [PLT’s PreK-8 Guide Resources by Activity webpages](#) and play one of the [Earth & Sky radio show correlations](#) (have speakers hooked up to computer).*

- 8:45 Discuss outside assignment--**MY**  
 Credit registration  
 Assignment: Read pages 100-107 in Forest Ecology module. Bring buds!  
 Good night!

Saturday

- 8:00 Welcome, Overview, What do you know about fire? (quick large-group share)  
**PLT FIRE Bingo--SK**
- 8:30 "Two Sides of Fire" video (16 min.)  
**Living with Fire** (#81, p. 350 and H.S. FE, #7). **Fire Management** (#8)  
 Brainstorm + 's and - 's of fire (H.S. FE, p. 86). (5 min.)--**SK**  
 Review Fire Triangle (10 min.)—**SK**  
 Highlight technology connection ([www.nifc.gov](http://www.nifc.gov)) in enrichment of #81.  
 Highlight SAFETY notation in guide.  
**Fire and Fuels** (#81, Extension) (~30 min.)--**SK**  
**Fire Tag** (#81, Variation) (~15 min.)--**MY**  
**Every Tree for Itself**, cont'd. (Fire variations) (~15 min.)--**SK**
- 10:00 BREAK
- 10:15 **Forest Health and Fire** (FE, #8, p. 96)--**SK**
- 11:00 **"Burning Issues" CD-ROM**—introduction and Southern Pine Ecoventure--**MY**
- 12:15 LUNCH
- 12:45 **Bursting Buds** (# 65)--**MY**
- 1:15 PLT on the Spot--**SK**
- 1:45 Using PLT to Meet Your Needs--**MY**  
*Review Enrichments, App. 2 (conceptual framework), App. 3 (storylines), App. 7 & 8, Indices, and App. 10-15.*  
 Correlations to state standards  
 (Planning for Success: Introduction to AKCA (constructivism). Order matters!)  
 Create a "Quick List"
- 2:00 Peer teaching planning
- 2:30 Peer teaching
- 4:00 BREAK (and help with cleanup)
- 4:15 Review additional PLT resources: *Branch* newsletter, Every Student Learns Outside™ Initiative, website, etc.  
 Wrap-up. Review objectives. Review questions we used at the beginning of the workshop.
- 4:45 Evaluations and Thanks for coming!

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**Minnesota**  
**PLT Early Childhood Workshop Agenda (Facilitator Copy)**  
**Saturday, Jan. 13, 2007 9 – 3:30 pm**  
**Prairie Wetlands Learning Center, Fergus Falls, MN**

*Workshop goals:*

1. Identify best practices when working with very young children.
2. Introduce PLT as a tool for teaching young children.
3. Demonstrate methods for teaching outside with young children.

8:45	Arrive- coffee, tea, snacks? (PWLC provides hot H2O)	Facilitator Notes
9:00	Sign in, pick up agendas & “Children Under 6 Matching Game”. <b>Icebreaker:</b> Distribute one sound canister to each person – find your matching sound	
9:15	<b>Introductions</b> (Laura Duffey) <b>Facility history (Laura Bonneau, PWLC)</b> <ul style="list-style-type: none"> <li>• Pass out <i>PLT Early Childhood Supplement</i> and name labels.</li> <li>• Pass out Dept of Ed’s <i>Alignment of Minn. K-12 Kindergarten Academic Standards with the EC Indicators of Progress: Minn’s Early Learning Standards</i>.</li> <li>• Explain that the EC Supplement <b>MUST</b> be used with the preK-8 Activity Guide.</li> </ul>	Connecting to State Standards
9:30	<b>PLT Early Childhood activity</b> The Shape of Things pg. 3 MAIN – Make shape necklaces COGNITIVE: Leaf Match Game MUSIC: Leaf Song Potty break MAIN: I Spy – OUTSIDE	Make and take model.  Use of music and movement.
10:15	<b>Break</b> SNACK: Shape Snack	
10:30	Learning theory: <b>Cut-list puzzle:</b> Characteristics of learners younger and older than age 6. Learning styles of very young children. Use of music and movement. Why EE is a natural fit for early childhood?	Purpose- to orient educators about learning styles of very young children
11:00	ART: Clay Pictures (clay recipe) can do during discussion Learning theory: <b>White board discussion.</b> Write categories on board: Time Frame, Program/Play Structure, Teaching Methods, Physical Set-up, Routine, Space, Materials, Curriculum, Outside. Use handout: “Creating an Environment of Opportunity.”	Purpose- participants share experiences of own teaching methods best practices done or observed.
11:30	<b>PLT PreK-8 Activity (Laura Bonneau)</b> <i>Have Seeds Will Travel –OUTSIDE collect seeds outside using paper bags, masking tape wristbands, and/or socks.</i> Do sorting inside. Debrief- Show how activities address science standards from <i>Alignment</i> document (page 24)	Purpose- sample an activity from the PreK-8 guide
12:00	<b>LUNCH - BYO</b>	
12:30	Distribute <i>PLT PreK-8 Activity Guides</i>	



	Policies, indices Pass out <i>Natural Wonders</i> guides (Available online)	
12:40	<b>Discussion:</b> Teaching Outside (Appendix 14, page 449) <i>Write headings on board:</i> <ul style="list-style-type: none"> <li>• <i>Why don't educators explore outdoors more?</i></li> <li>• What are possible behavior issues with exploring the outdoors?</li> <li>• Tips for teaching outside.</li> </ul>	Visit PLT Every Student Learns Outside website
1:00	<b>Teach back time</b> Give small groups 20 minutes to read about and demonstrate activities. Each group will choose one of the following activity kits to demonstrate. "How Big is Your Tree?" "Nature Adventure" "Get in Touch with Trees" "Signs of Fall" "Tree Life Cycle" "What Can You Hear in the Forest/Prairie?"  <i>From K-8 guide:</i> "Every Tree for Itself" "Birds and Worms" "Sounds Around" Part A "Peppermint Beetle"	
1:20	<b>Small group demonstration time</b> – 4 activities @ 20 min each plus one 10-min break (lay out Textured Gorp activity snack)	Purpose- Give a hands-on creative opportunity to participate.
2:20	Activity 22: Trees As Habitat Read Aloud <i>Good Night Owl</i> Discuss Reading Connections in the PreK-8 Guide. Give some time for participants to review Reading Connections.	Bring Sample Reading Connections Books from the activities used.
2:45	Go over resources, book display items, GreenWorks!	
2:55	<b>Book exploration time</b> —give participants a chance to find activities and tab. Use Lesson Planning Worksheet (page 470) Share ideas.	
3:15	Prizes, Evaluations, Certificates	
3:30	End	

Back up if extra time – demonstrate PLT activities not chosen by small groups.

Key Components to consider when planning Early Childhood Workshops:

- \* The workshop must be at least 6 hours long
- \* Allocate adequate time for an overview on EC pedagogy, using the *Natural Wonders* book (free on <http://www.seek.state.mn.us/publications/naturalwonders-0.pdf>). Many EC providers have not had limited EC pedagogy or college-level courses on EC methods.
- \* Whenever possible, practice what EC preaches: Examples--Have enough materials so that each participant can do/make the activity; set up activity stations and allow free choice, practice asking open-ended questions.
- \* Practice what EE preaches: Examples-- demonstrate proper techniques for outdoor learning with young children, take a potty break before going outside, etc.
- \* If you aren't an EC "expert," invite one to co-present with you. Because of the number of materials needed to properly present these workshops, co-facilitators are always recommended.
- \* These are great workshops! This audience is searching for activities like PLT offers. It is a great match. Once you get your activity kits set up, it is an easy workshop to prepare for!

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## APPLYING LITERACY SKILLS THROUGH EXPLORATION OF ENVIRONMENTAL ISSUES

### Municipal Solid Waste (MSW) Workshop California Science Teachers Association 2006

Saturday, October 21, 2006 11 AM to noon  
Bill Graham Auditorium Civic Center: Room 404

#### 11 AM –Welcome!

Hand out tags stickers indicating English language development (ELD) level – beginning, intermediate, advanced. Let participants know we are assuming they are a middle school science class involved with investigating issues related to land use, waste, etc. Ask them to role-play their ELD level.

- **Science Standards:** Investigation and Experimentation – *Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept...Communicate the logical connection among hypothesis, science concepts, tests data, data collected, and conclusions drawn from scientific evidence...Grade 9-12 – Formulating explanations using logic and evidence; Analyze situations and solve problems that require combining and applying concepts from more than one area of science*
- **English-Language Arts:** Listening and Speaking *1.1 Emphasize salient points to assist the listener in following the main ideas and concepts; 1.5 Support opinion with detailed evidence and with visual or media displays...2.4 Deliver persuasive presentations; 2.5 Deliver presentations on problems and solutions.*

#### 11:05

**Brainstorm: What types of things do you throw away?** [Sara]

1. Let group respond in general...
2. Short teach - basic categories of waste: *reusable, recyclable, discardable, compostable, Household Hazardous Waste= HHW*

**Brainstorm: What are examples of items for each of these categories?** Demonstrate some of the items they may find in the bags – provide names and tape to a chart and label. *Mention “Renewable or Not” activity.*

1. Divide into 4 groups (divide evenly with language abilities) give each group a bag to analyze according to categories. Each group chooses a **recorder, reporter, sorter, facilitator** – discuss cooperative group organization. Each group sorts and then discusses their grouping. Ask to analyze items, estimate amounts of the whole, etc.
2. Debrief with each group sharing their observations...
3. Debrief what SDAIE (Specially Designed Academic Instruction In English) strategies were demonstrated (refer to list on chart)

11:25

**Overview**

1. Introductions – Kay and Sara
2. Intro to PLT, etc. – relevance of EE to ELD - Kay and Sara
3. Quick survey of the participants...who are they?

11:30

**Why is it relevant in your students' lives to explore MSW? Kay**

- Valuing our natural resources
- Amount of waste generated, etc
- Environmental Justice issues (definition and background of Environmental Justice—p. 13-14)

11:35

**Pass out MSW guides**

**Quick Hike through the Module - Kay**

1. Walk thorough activities – *explain how module activities follow EPA's preferred hierarchy of solid waste management*
2. Walk through appendices
3. **View Activity 6: part B Kay**  
Talk about Part A – What is a landfill? Use model landfill overhead. Describe setting of each proposed landfill site. Describe how activity works. Debrief...how would you use this activity with your students?

11:55

**Wrap-up – all**

1. Remind about web address — [www.plt.org](http://www.plt.org)
2. Evaluation forms-Certificates
3. Freebies.

Thanks!

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1-hour conference session or part of a PreK-8 Workshop focusing on reading connections



## NSTA Conference

Salt Lake City, UT  
December 7, 2006

### Improve Your Science and Reading Connections with PLT

Catherine Estes  
Project Learning Tree  
[cestes@plt.org](mailto:cestes@plt.org)

#### Goals of the session:

1. To demonstrate a variety of Reading Connections from PLT's *PreK-8 Environmental Education Activity Guide*.
2. To conduct sample activities from the PreK-8 Guide that highlight reading opportunities for you and your students.

#### Agenda:

- A. Welcome/Introductions
- B. Introduction to PLT
- C. PLT Reading Connections Overview (short PPT)
  1. PreK-8 Introduction (p. 7)
  2. 4-8 books listed with each activity
  3. Read alouds (#22)
  4. Stories & case studies (#8, #44, #56, #71, #80, #87, etc.)
  5. Additional reading opportunities with Earth & Sky (#84)
- D. Sample PLT Activities with Reading Connections
  1. Pairs choose a book, review the PLT activity in corresponds to, and report to the group how they would use both with their audience.  
*(Note: PLT facilitator must bring collection of books listed in activities' "Reading Connections," as well as a copy of the activity each supports)*  
AND/OR
  2. Group conducts a PLT activity together that highlights a story or case study. See number 4 above for possible activities.  
AND/OR
  3. Group conducts #84 and hears a downloaded version of the Earth & Sky radio show (as an engager for a PLT activity, students might read the radio show for homework and write response questions for discussion the next day).
- E. Questions? How can you use PLT and these reading connections with your audience?

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# FORESTRY INSTITUTE FOR TEACHERS

## U. C. FORESTRY CAMP, PLUMAS COUNTY

June 18 - June 24, 2006



### Sunday, June 18

3:00-4:00 Registration & Pre-assessment  
 4:00-5:00 **CF** Orientation with Foresters (Tour Camp & Keying Activity)  
 5:00-5:45 **CF** Introductions- Mike De Lasaux, U. C. Cooperative Extension & Nancy Jones, Education Consultant/Teacher  
 5:45-6:00 **CF** Grounds Orientation - Jim Schaber, U. C. Forestry Camp Manager  
 6:00-7:00 **PA** BBQ  
 7:00-8:45 **DH** Forest Consequences Activity – PLT PreK-8 #33 (Staff)  
 8:45 **CF** Campfire

### Monday, June 19

7:00-8:00 **DH** **BREAKFAST**  
 8:00-8:45 **DH** Introductions & Overview- Mike De Lasaux & Nancy Jones  
 8:45-11:00 **DH** Democracy In Action Activity – PLT PreK-8 #57 (California Forestry Perspectives)  
 Facilitator- Mike De Lasaux,  
 Public Forest Management- Terri Simon-Jackson, Plumas National Forest  
 National Park Service- Louise Johnson, Lassen Volcanic National Park  
 State Regulatory- Andrea Tuttle, Former Director,  
 California Department of Forestry & Fire Protection  
 Private Industrial Forest Management- Frank Barron, Crane Mills  
 Private Non-Industrial Forest Management- Pete Thill, Penman Timber  
 Environmental Perspective- Chad Hanson, John Muir Project, Earth Island Institute  
 11:00-11:15 **BREAK**  
 11:15-12:00 **CF** **Project Learning Tree-** Kay Antunez, California Department of Forestry  
 12:00-12:30 **CF** **SACK LUNCH (optional questions & reflection)**  
 12:30-4:30 **CF** Forest Resources Management Sessions and Curricular Connections  
**SH** Station 1 - Fire and Fuels Management, Jerry Hurley, retired Plumas NF  
**Forest** Station 2 – Soil- Emily Moghaddas, Plumas NF  
**Forest** Station 3 – Watershed- Mike De Lasaux, UC Cooperative Extension  
 4:30-5:00 **BREAK**  
 5:00-6:00 Forest Resources Education Activities- Tom Catchpole, retired, U. S. Forest Service  
 6:00-7:00 **DH** **DINNER**  
 7:30-9:00 **SH** PLT Forest Ecology & Forest Issues Secondary Modules; Burning Issues DVD (5<sup>th</sup> grade +) - Staff  
 9:00 **CF** Campfire

### Tuesday, June 20

7:00-8:00 **DH** **BREAKFAST**  
 8:00-8:15 **DH** “Community Meeting”  
 8:15-12:15 **CF** Forest Resources Management Sessions and Curricular Connections  
**SH** Station 1 - Wildlife Management- Julie Kelly, Sierra Pacific Industries  
**Forest** Station 2 – Silviculture- Patti Millet, Plumas National Forest  
**Forest** Station 3 – Tree Measurements- John Nicoles, retired, East Bay Regional Parks  
 12:15-1:15 **CF** **SACK LUNCH (optional questions & reflection)**  
 1:15-2:15 **CF** Educational Resources Nancy Jones, Dennis Mitchell, Brian Brown

## **Tuesday, June 20, Continued**

2:15-4:30 Curriculum Unit Breakouts- Nancy Jones, Dennis Mitchell, Brian Brown  
4:30-5:00 **BREAK**  
5:00-6:00 **CF** Forest Resources Activities (K-6 grades)- Tom Catchpole, retired U. S. Forest Service  
6:00-7:00 **DH** **DINNER**  
7:00-8:15 **DH** Forestry & Environmental Issues, Craig Thomas, Sierra Nevada Forest Protection Campaign  
8:30- 10:00 **CF** Campfire

## **Wednesday, June 21**

7:00-8:00 **DH** **BREAKFAST**  
8:00-8:15 **DH** "Community Meeting"  
8:15-1:30 **CF** Field Tour: Forest Vegetation Management (biomass & traditional forest harvesting)  
1:30-2:30 **SACK LUNCH**  
2:30-5:00 **CF** Curriculum development and curriculum project information, Staff  
5:00-6:00 **BREAK (Group Photograph)**  
6:00-7:00 **DINNER**  
7:00-10:00 **DH** California Spotted Owl calling (optional)

## **Thursday, June 22**

7:00-8:00 **DH** **BREAKFAST**  
8:00-8:15 **DH** "Community Meeting"  
8:15-11:00 **CF** Field Tour: Lumber Manufacturing  
11:30-12:30 **SACK LUNCH**  
12:30-1:30 Industrial Forest Management, Tim Feller, Sierra Pacific Industries  
2:00-?? YOUR TIME - Explore various points of interest in Plumas County  
6:00-7:00 **DINNER (for those still in camp)**

## **Friday, June 23**

7:00-8:00 **DH** **BREAKFAST**  
8:00-8:15 **DH** "Community Meeting"  
8:15-10:30 **DH** Panel: Community Forestry –  
10:30-10:45 **BREAK**  
10:45- 12:00 **CF** Project Wild & Curriculum Project development, Staff  
12:00-1:00 **SACK LUNCH**  
1:00-2:00 **CF** Curriculum Project development, Staff  
6:00 Rough draft of curriculum project due  
6:00-7:00 **DINNER**  
7:00-8:00 **CF** Group Activity

## **Saturday, June 24**

7:00-8:00 **DH** **BREAKFAST**  
8:00-10:00 **DH** Forest Consequences, Post-Assessment & Evaluation, Mike De Lasaux & Nancy Jones  
10:00-11:00 Unit Sharing and Wrap-up  
11:00 Pack-up and check out  
12:00 **FIT ENDS**

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PLT Embedded in Methods Class  
Selected Excerpts From:

Course Syllabus ED 499 Elementary Education  
**Methods of Science, Social Studies, and Environmental Education**

*Fall Semester 2003-2004, Tuesday 2:00-4:50, 4 Credits*

**Instructor:** Al Stenstrup  
**Office Hours:** 1-2 PM and 5-6 PM Tuesday's or by appointment (Science Building 108)  
**Phone:** xxx-xxx-xxxx (Day) xxx-xxx-xxxx (Cell) xxx-xxx-xxxx (Home)  
**E-mail:** [astenstrup@yahoo.com](mailto:astenstrup@yahoo.com) or [allen.stenstrup@dnr.state.wi.us](mailto:allen.stenstrup@dnr.state.wi.us)

## 2) Standards Addressed

The NCATE Standards, the Wisconsin Teaching Standards, and Wisconsin's Model Academic Standards (WMAS) in the areas of Social Studies, Science, and Environmental Education will be addressed throughout the semester. Many will be discussed each week as the various topics and objectives are presented, explored and practiced.

## 3) Instructional Strategies Utilized in the Course

Lecture, large and small group discussions, technology/web sites, children's literature, inquiry-based activities, presentations, creating and implementing lesson plans, critiquing lesson plans, analyzing textbooks and materials, creating unit plans, cooperative learning, outdoor investigations, simulations, science kit usage, concept mapping, video/DVD/CD, geography mapping, and reflection journals.

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## 6) Course Description

To explore the interrelationships of social studies, science, and environmental education in elementary and middle schools, focusing on curriculum and methodology, which promote scientific literacy, a social, cultural and historical perspective, global and environmental sustainability and intergenerational responsibility.

## 7) Course Objectives

It is the goal of this course, assuming active participation and interaction by the members of the class, that students will achieve the following:

1. Develop an understanding of the relationship between social studies, science, and ecological principles within the entire scope of classroom life.
2. Develop the ability to examine and critique various teaching strategies and instructional resources used in teaching elementary and middle school social studies, science, and environmental education.
3. Develop the capacity to engage in reflective, critical analysis of the scientific and social world; explore ways to develop these capacities in children.
4. Develop an awareness and knowledge of social action skills as an important aspect of personal and professional development toward citizen action skills.
5. Identify the use of technology in promoting science, social studies, and environmental education.
6. Observe and participate in classroom experiences associated with science, social studies and environmental education including participation in a Project Learning Tree workshop.

## 8) Required Readings and Materials

Wisconsin's Model Academic Standards: Social Studies & Science & EE

These will be handed out in class. The Standards can also be downloaded from the Department of Public Instruction Internet site at <http://www.dpi.state.wi.us> or from the CD with all WDPI Standards on reserve

in the library.

*Project Learning Tree: Environmental Education Activity Guide*. American Forest Foundation: 2002. This supplementary set of teaching activities will be available during the semester. The cost of the workshop is \$15.

### **10) Requirements**

**E) Outdoor Experience and Analysis.** Due December 2, 2003

Using the calendar provided by the Aldo Leopold Nature Center, select an opportunity to observe and participate with a group of students that are on a field trip to the center. The observation should be at least 1-2 hour in length. The field experience will be lead by a naturalist from the center or a teacher. The programs are mostly outdoors, so be dressed for outdoor activities. Write a 1-2 page analysis of the experience. What was the students reaction? What seemed to work? Why? What did not work? Was discipline a problem? Were there any special needs students? Would you take your class on this type of experience?

#### **Extra Credit Opportunities:**

2. Individually or a team lead an activity out of Project Learning Tree, Project WILD, or Project WET that has a science, social studies or environmental connection. Max. 5 Points

### **11) Topical Outline and Class Schedule**

#### **Week 1 – September 2**

Introduction, Review of Syllabus, Practicum Description, Student Assessment & Resource Analysis Assignment, The Standards – Science, Social Studies and Environmental Education, Outdoor Activity – UV Radiation, Children’s Literature Assignment.

#### **Week 2 – September 9**

Foundations to Social Studies – Wisconsin Model Academic Standards. Global Studies. Explain Remaining Assignments, Global Issues Assignment, Material World, Population, Mapping Simulation, Geography, K-W-L Model.

#### **Week 3 – September 16**

Introduction to Project Learning Tree. Activity 63: Tree Factory. Correlations of PLT to Science and Social Studies Standards. Constructivist Model. Using School Sites and School Forests. Wisconsin Forests. Sample Indoor and Outdoor Activities. Music and Movement. Early Childhood Activity: To Be a Tree.

#### **Week 4 – September 23**

Forms of Energy, Transportation, Energy & Society Kit, Energy Chains Activity, Economic Education, Invited Guest from the Education Communications Board: Wendy Wegenke. Learning Styles KAV

#### **Week 5 – September 30**

Foundations to Science – Wisconsin Model Academic Standards, Inquiry-based learning, Lesson Plan Development, Use of Posters and Data Activity, Science Process Skills, Nature of Science & Science Connections. Class Critique.



**Week 6 – October 7**

4<sup>th</sup> Grade Wisconsin History, Interdisciplinary or Integrated Instruction. Concept mapping. Activity 76: Tree Cookies. State Historical Society Invited Guest: Author Bobbi Malone.

**Week 7 - Fall Break – No Class****Week 8 – October 21**

Check on Unit Plan Project, Progress in Practicum, Mid-Term Exam. Foundations to EE – Wisconsin Model Academic Standards. Teaching about the Environment – Awareness to Action. Community Issue Investigation Process, Government Processes

**Week 9 – October 28**

Assessment and Evaluation. Invited Guest: Lisa Carey, Edgewood Faculty Social Studies Methods, Democracy, Earth & Space Science. Air Education.

**Week 10 – November 4**

Monitoring, Community Investigations, Science Applications. Technology, Ideas Website, NatureNet Website. Invited Guest: Jone Moody, 4<sup>th</sup> grade Teacher Madison Public Schools, Social Studies Expert

**Week 11 – November 11**

Life and Environmental Science. Water Investigations, Wisconsin Waters. Activity 44: Water Wonders and Water Cycle Song and Dance. Your Watershed – Madison Lakes. Global Waters. Food Webs.

**Week 12 – November 18**

Science Safety and Chemicals. Science in Social & Personal Perspectives, Invited Guest: Lisa Wachtel, Madison Public Schools – Science and Environmental Education Coordinator:

**Week 13 – November 25**

Space Science. Science Kits – Foss and SEPUP. Invited Guest: Amy Lauer: Edgewood K-16 Science Coordinator.

**Week 14 – December 2**

Begin Presentations of Unit Plan Presentations. Hand in Outdoor Observation.

**Week 15 – December 9**

Course Evaluation, Professional Opportunities. Complete Presentations of Unit Plan Presentations

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