

School-Based Forest Education in the Northern Forest



National Community Forestry Center
Northern Forest Region
July 2003, Edition 4

School-Based Forest Education Response Card

Use this card to advise us of additional forest programs connected to schools in Northern Forest communities, or to comment upon programs in this directory that you are familiar with. If you require additional space please use a separate sheet of paper.

Your Name: _____

Address:

Phone: (____) _____

Email: _____

Name of program: _____

Name of School sponsoring the program:

Brief program description:

Your Comments:

About the National Community Forestry Center . . .

The National Community Forestry Center (NCFC) is a decentralized network with four regional centers and a national coordinator. The Northern Forest Regional Center of the NCFC is administered by Yellow Wood Associates, Inc. of St. Albans, Vermont. The Northern Forest Region, our primary area of service, comprises the states of Maine, New Hampshire, New York, and Vermont.

The core purpose of the Northern Forest Regional Center is to help rural people conduct and use research to inform decision-making about forest resources. Our goal is to add value to the work of communities, organizations, and institutions in our region who share a vision of healthy communities and healthy forests, now and for future generations.

We look forward to engaging you in this unique opportunity to support rural people in creating healthy communities and healthy forests. We would be happy to respond to your inquiries about the Center's services, or about specific forest topics, and are prepared to assist you in locating forest-related information and resources.

The National Community Forestry Center is a program of the National Network of Forest Practitioners. Network members share an interest in rural community development based upon sustainable forestry, and, even more importantly, a conviction that healthy communities and healthy ecosystems are interdependent.



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When was the last time you questioned the tools being used to educate today's youth about the environment? Ask your children what they know about forests. Do they have an appreciation for the multiple values offered by the resource? Do they understand the concept of stewardship?

The National Community Forestry Center, Northern Forest Region recognizes that education is one key to fulfilling our core purpose: to help rural people conduct and use research to inform decision-making about forest resources. In response to concerns raised by our advisory council about the need for appropriate forest-related education, we offer this publication. We want to encourage those concerned to connect with programs already available in our region, learn from them, and where needed, improve upon them.

The following pages contain only a few of the forest education programs operating in the Northern Forest Region. We have chosen to focus upon school-based programs, and we have not attempted to identify all programs in all four states. Nor have we evaluated the programs. If you are aware of innovative approaches to school-based forest education, please let us know by filling out the postcard at back of the booklet. If this publication inspires you to explore one or more of the programs listed here, please let us know what you find.

Project Learning Tree

Project Learning Tree is a nationwide environmental education program for educators working with students in preschool through grade 12. Project Learning Tree state coordinators work to provide interdisciplinary supplements to educators. The program uses forests as a “window on the world” to increase students’ understanding of the environment and issues affecting it. Through workshops, educators learn to address such questions as: What is a forest?; What sustains our forests?; Who values our forests, and for what reasons?; Why are some trees cut down?; and, Why manage a forest?

Project Learning Tree’s mission is “to increase students’ understanding of our environment, stimulate students’ critical and creative thinking, develop students’ ability to make informed decisions on environmental issues, and instill in students the commitment to take responsible action on behalf of the environment.”

Contacts:

 Maine Project Learning Tree
 Pat Maloney, PO Box 344, Augusta, ME 04332
 (207) 626-7990

 New Hampshire Project Learning Tree
 Esther Cowles, 54 Portsmouth Street, Concord, NH 03301
 (603) 226-0160

 New York Project Learning Tree
 Richard Rommel, Department of Environmental
 Conservation, 21 South Putt Corner, New Paltz, NY 12561
 (845) 256-3078

 Vermont Project Learning Tree
 Virginia Anderson, VT Department of Forest, Parks & Recreation
 103 So. Main Street Waterbury, VT 05676
 (802) 241-3651

Vermont Institute of Natural Science

The Vermont Institute of Natural Science has programs to help children of all ages develop an appreciation for the natural world. Environmental Learning for the Future (ELF) is a program designed for elementary-aged children, taught by parents and other community volunteers. The community-school partnership helps increase environmental literacy. The ELF program encompasses five ecological concepts: habitats, cycles, adaptations, designs of nature, and forces of nature. Each volunteer receives a copy of Hands On Nature, ELF's companion teaching guide. The publication includes background information and activity descriptions for each workshop.

Small Wonders is a nature awareness curriculum and training course for preschool teachers and caregivers. It helps small children learn about the natural world around them. Childcare providers/preschool teachers who work with three-, four-, and five-year-old children can participate in the Small Wonders training project. Small Wonders themes include growth and change, animal homes, and connections. Children learn the magic of maple trees and investigate the many ways that plants, animals and even the earth itself change over time. Every month teachers share their newly discovered activities, knowledge, and enthusiasm with the children in their care.

The Environmental Citizenship curriculum teaches middle school students how our daily decisions affect the natural world and encourages future stewardship. Environmental Citizenship is comprised of four interdisciplinary ecosystem-based units and one unit focused on local environmental decision making. The curriculum helps educators instruct to state education standards while providing learning opportunities for students to attain essential skills and knowledge.

Contact:

Vermont Institute of Natural Science
27023 Church Hill Road
Woodstock, VT 05091
(802) 457-2779

The Farm & Wilderness Foundation

The Farm & Wilderness Foundation sponsors year-round experiences for young people that emphasize the building of community through the values of cooperation, simplicity, responsibility, empathy, spirituality, and service. They offer fall and spring school programs for students in preschool through grade 12. Farm and Wilderness programs focus on four themes: a relationship to the land, living in community, working together, and life of the spirit. They seek to expand awareness of the beauty and value of the natural world as well as the need for responsible stewardship.

Contact:

Betsy Bass Shands
School Year Programs
263 Farm & Wilderness Road
Plymouth, VT 05056
(802) 422-3761

Forest Watch

Forest Watch is an education outreach program that focuses on white pine health in New England. Researchers at the University of New Hampshire (UNH) initiated this program to involve primary and secondary students in the collection and processing of data relating to air pollution damage in forest stands. Students participate in three types of science activities in Forest Watch: forest stand assessment, laboratory-based assessment of damage symptoms, and image processing/data analysis of thematic mapper data for the area around their school.

Forest Watch currently includes over one hundred schools and study plots across New England, allowing UNH to conduct a regional analysis of white pine health. Student data are compared to spectral data collected from samples sent to UNH, and the student and spectral data are compared to tropospheric ozone data collected from state and Environmental Protection Agency air quality monitoring sites throughout New England.

Contact:

Ryan Huntley
Morse Hall
University of New Hampshire
Durham, NH 03824
(603) 862-0188

China School Demonstration Forest

The China School Forest is a town-owned tract of land located behind the primary and middle schools in China, Maine. The property has been sustainably managed for forest products since the early 1980s, and was recognized as a Maine Tree Farm in 1985. The forest received the 1997 Outstanding Maine Tree Farm Award for its exemplary stewardship and educational practices.

The purpose of the demonstration forest is to provide a complete picture of the forest as a dynamic ecosystem, as a source of valuable natural products, and as a recreational resource. The forest's location and design offers central Maine students a "hands-on" learning experience.

There are twelve learning stations throughout the forest. Topics explored include forest choices and forest measurements. Educators may check out "tree trunk" boxes from the school libraries that contain teacher resources, forestry tools, and other items that help to integrate the forest into school curriculum.

The schools hold Forest Day where students and staff from kindergarten through seventh grade spend half the day outside participating in hands-on lessons related to forests. The purpose of the day is for students and staff to learn more about Maine's natural environment. Staff members, community volunteers, and other resource people run presentations. Representatives from the Maine Forest Service, International Paper, China Lake Alliance, and the Kennebec Water District have all participated. Teachers are encouraged to integrate the outdoor classroom into all subject areas.

Contact:

Anita Smith
China Middle School
RR1, Box 1162
South China, ME 04358
(207) 445-2065

Northern Woodlands Magazine

More than 150 teachers and their 5,500 students in middle schools, high schools, and vocational schools throughout the region are using *Northern Woodlands* magazine in the classroom. Each issue is accompanied with a teacher's guide and activity sheets to incorporate the magazine's articles into the school curriculum.

Northern Woodlands is constantly looking for high school and middle school teachers in New York and Northern New England interested in presenting students with a broad view of the environment and natural resource conservation. Their purpose is to help young people think more clearly about environmental issues and increase their enjoyment of the outdoors, thus strengthening their connection to the land. The program is funded through forest product companies, industry associations, state agencies, private foundations, and Cooperative Extension.

Contact:

Northern Woodlands
c/o Ghost Writers Communication
P.O. Box 196
Poultney, VT 05764
(802) 287-4284

Brenton S. Halsey, Jr. Memorial Outdoor Classroom and Demonstration Forest

With the help of Maine Project Learning Tree, the Georgia Pacific Corporation has been able to use their forest property to help young people gain an awareness and knowledge of the world around them, as well as their place within it. Georgia Pacific has constructed six outdoor classrooms and several learning stations to present forests as dynamic ecosystems. Topics addressed by the outdoor classrooms include clear-cutting, forest measurement, and comparing managed vs. unmanaged forests. The goal is to combine Georgia Pacific's outdoor classrooms and learning stations with Project Learning Tree activities and become a model for demonstration forests throughout the country.

Contact:

Georgia Pacific Corporation
P.O. Box 551
Old Town, ME 04468
(207) 827-0613

Vermont Leadership Center

The Vermont Leadership Center offers school programs for students in kindergarten through college. They work with over twenty-five schools and communities in Vermont's North-east Kingdom. The Center's programs use the surrounding forest as an environment for educational exploration, complementing classroom learning in science, math, and other content areas.

Charleston Elementary School has established a Holiday Gift Program with the help of the Vermont Leadership Center. The program allows fourth graders to construct wooden Yuletide centerpieces from spruce slab wood to sell locally. Students are actively engaged in protecting and enhancing the cultural and ecological values in their community. They learn the importance of teamwork, trust, knowledge, and gain an appreciation of local forest resources.

Contact:

William Manning
Vermont Leadership Center
P.O. Box 220
East Charleston, VT 05883
(802) 723-6551
www.vtlc.org

Shelburne Farms

Shelburne Farms offers school field trips to connect children to the forest in their region. “Fall in the Forest” is a woodland hike to increase students’ awareness and appreciation of forest wonders and values. Students learn basic tree identification skills and understand the forest as an important natural resource.

“Wildlife, Woodlots and Work Skills” gives fourth through eighth graders the opportunity to work collaboratively to assess wildlife and timber values within a particular area of forest. Students become practicing foresters and wildlife biologists for a day, learning to use forestry tools and techniques.

Shelburne Farms offers one-day school programs linked to Vermont’s Framework of Standards and Learning Opportunities to assist educators in addressing specific standards in their curricula. Many of the programs are used to help build students’ sense of place.

Contact:

Shelburne Farms
1611 Harbor Road
Shelburne, VT 05482
(802) 985-8686

Challenging Careers in Wood Manufacturing

Wood manufacturing is a traditional industry dating back hundreds of years. Today in the Northern Forest, nearly 80,000 people are employed in a variety of wood manufacturing jobs. In this 8-minute video, students discover job possibilities as saw mill operators, designers, lumber graders, sales managers, and production managers. They are encouraged to start with classes at a technical center to learn the fundamental skills of wood manufacturing, tool use, and wood characteristics/identification while constructing individual projects. *Challenging Careers in Wood Manufacturing* was produced through a collaboration of the Vermont Wood Manufacturers Association, Empire State Forest Products Association, New Hampshire Timberland Owners Association, and the Maine Wood Products Association.

Contact:

Tina Harvey
Ghost Writers
VT Wood Manufacturers Association
P.O. Box 196
Poultney, VT 05764
(802) 287-4284
www.woodcareers.org

Temperate Forest Foundation

The Temperate Forest Foundation has held Teacher Tours of South Carolina, North Carolina, Louisiana, Wisconsin, California, Oregon, Washington, Maine, and Canada. Teachers learn how foresters and the forest products industry are meeting needs on a regional basis, while also protecting the health, diversity, productivity, and resiliency of the forest. They also gain an understanding of the tools necessary to help students think more critically and make more informed decisions. Sustainable forestry and its contribution to the even larger vision of sustainable development are key themes.

Selection of participants for the tours is based on a desire to learn, and an ability to incorporate teachings into lesson plans. The Foundation helps match interested teachers with sponsors offering to cover travel expenses. The tours are an intensive three days, with visits to many wood lots and mill operations. Participants gain in-depth knowledge of the region's culture, economy, and ecology.

Contact:

Renee Kang
Temperate Forest Foundation
14780 SW Osprey Dr., Suite 355
Beaverton, OR 97007-8070
(503) 579-6762
www.forestinfo.org/Teachers

Tanglewood 4-H Camp and Learning Center

Tanglewood 4-H Camp and Learning Center offers environmental education programs for students in grades K-12. Students learn the basics of ecology and are challenged to apply their understanding of these concepts in forest, river, and seashore ecosystems. They work cooperatively in small groups to develop life skills, a sense of community spirit, and an awareness of their connection to the natural world. School programs are organized around the six “Learning Results Principles” developed by the State of Maine: clear and effective communication, self-directed lifelong learning, problem solving, responsible citizenry, collaboration, and integrative thinking.

School programs include several one-day adventures and winter and fall/spring overnights. Forest Ecology Adventure and Sustainable Forests are two of the fall/spring overnights. Forest Ecology Adventure students go on an overnight expedition deep into a mixed coniferous and deciduous forest. They look for signs of wild animals that live in the trees, plants, and fungi. Through hands-on, scientific methods, students learn about the interconnected world of forest soils, trees, and wildlife. In the Sustainable Forest Education program, students spend a full day learning the basic concepts of ecology, sustainable forestry, and wood-lot management in a recently harvested demonstration area. The overnight programs include an understanding of the wood and paper products industry.

Contact:

Heather Francis
Environmental Education Program Coordinator
Tanglewood 4H Camp and Learning Center
RR1 Box 670
Lincolntonville, ME 04849
(207) 789-5805
hfrancis@umext.maine.edu

Black Locust Initiative

The Black Locust Initiative is a nonprofit organization in Trumansburg, New York that teaches sustainable forestry through hands-on workshops open to the public since 1994. The workshops bring both children and adults into the woods and involve hands-on outdoor projects to teach ecologically sound forest management. Using local forests and woodlots, participants learn how to harvest for green building needs, while helping to improve the environment. At each workshop, ecotours introduce basic environmental concepts, tree and bird identification, and green building projects.

Central New York schools regularly participate in workshops covering forest conservation, soil analysis, watershed conservation, and ecological means to protect birds. With a grant from America-On-Line for equipment, the Black Locust Initiative also has developed an on-line curriculum to use in local schools. Teachers may access the website to prepare environmental lessons, and are provided with curricula, resources, and lists for materials and tools.

Contact:

Black Locust Initiative
Dave Gell
BOX 22
Trumansburg, NY 14886
607-387-6750
www.blacklocust.org

The Great Northern Forest: from Science to Stewardship

The Fairbanks Museum and Planetarium in St. Johnsbury, Vermont has recently released a Northern Forest Curriculum. The curriculum consists of a series of packets on a variety of subjects related to the science and natural history of the Great Northern Forest. Packets are derived from classes offered to elementary and middle school students at the Fairbanks Museum. Museum staff plan to produce a series of twelve packets each year over the next three years. Each packet contains goals for the class, key vocabulary, a class outline with in-class activities, follow-up activities, and resources for teachers. Class packets are available free for download from the museum's Northern Forest website, www.northernforestcurriculum.org

Contact:

Patricia Swartz
Project Coordinator
Fairbanks Museum and Planetarium
1302 Main Street
St. Johnsbury, VT 05819
(802) 748-2372
radon@conriver.net

Forests for the Future, Tin Mountain Conservation Center

The Tin Mountain Conservation Center provides environmental education programs to New Hampshire schools. Major programs include their Environmental Studies Program, Forests For the Future, and Project KITE (Kids In The Environment). The Center also offers teacher workshops, school-wide projects, extra-curricular programs, field trips, and special projects.

Forests For the Future is a program for junior high school students that focuses on forest ecology and natural resource management. This field-oriented course regularly takes eighth grade classes in Tamworth and Fryeburg's Molly Ockett Middle School to forest study sites. The courses cover all aspects of ecology including mammalogy, forest inventory, wetland study, and more. Students develop and present forest management plans for each study site.

Contact:

Michael L. Cline
Executive Director
Tin Mountain Conservation Center
P.O. Box 1170
Conway, NH 03818
(603) 447-6991
www.tinmtn.org

From Forest to Furniture

The Beecher Falls Division of Ethan Allen Furniture sponsors "From Forest to Furniture," a classroom demonstration for grades K-6. Students participate in a simulation of steps required to produce a small accent table, including felling trees, trucking logs, sawing, kiln drying, gluing panels, machining, sanding, assembly, and finishing.

In 1999, this program won the Vermont School to Work Silver Zone Award in the Orleans/Northern Essex region by providing innovative and creative, school and work-based educational opportunities for local students.

Contact:

Rosemary Riendeau
Beecher Falls Division of Ethan Allen
P.O. Box 217
Beecher Falls, VT 05902
(802) 266-3355

How To Grow A School Forest

The Wisconsin Forest Resource Alliance has worked with educators, forest industry professionals, universities, and state agencies to produce *How To Grow A School Forest*, a manual to aid teachers in adapting their school forests into working outdoor classrooms. Though the manual was developed using Wisconsin forests, teachers in the Northern Forest may find the information helpful for establishing demonstration forests on their school property. The manual is available as a downloadable .pdf file at <http://www.wfrea.org/handbook/handbook5.pdf>

Contact:

Wisconsin Forest Resource Alliance
3243 Golf Course Road
Rhineland, WI 54501
wfrea@newnorth.net

The Chewonki Foundation

The Chewonki Foundation has been developing environmental education resources for teachers, schools, and communities since the 1970's. The Foundation offers week-long experiences for schools in New England. The week-long program includes an introduction to the concepts and practices of sustainable resource management. This program serves primarily upper elementary and middle school children. Chewonki's 16-week Maine Coast Semester for high school juniors includes more in-depth field experiences in aspects of northern and coastal forest ecology. In addition to their classroom and field experiences in natural science, Maine Coast Semester students spend time working on Chewonki's farm and in the woodlots, using draft horses to minimize the impact to the shallow, wet coastal soils.

Contact:

Don Hudson
Chewonki Foundation
485 Chewonki Foundation
Wiscasset, ME 04578-4822
(207) 882-7323
dHUDSON@chewonki.org
www.chewonki.org

A Forest in Every Classroom

A Forest in Every Classroom is a place-based education model that teachers can use to integrate local forestlands and civic projects into their curriculum in meaningful and relevant ways. A unique collaboration between public land management agencies and nonprofit educational organizations, the program is a three-year pilot aimed at middle and high school students, and teachers.

The goal of the project is to foster students' understanding of place and to develop their civic skills in order to inspire and enable them to be long-term stewards of forests within their communities. To accomplish this goal, the project teaches: an understanding of local forests, focusing on forests as complex and dynamic systems of natural and cultural resources to be explored in an interdisciplinary way; citizenship and the fundamental tools of democracy, focusing on analyzing and communicating information for creative problem-solving and conflict resolution.

Contact:

Pat Straughan
Shelburne Farms
1611 Harbor Road
Shelburne, VT 05482

pstraughan@shelburnefarms.org

<http://www.shelburnefarms.org/educationprograms/family.shtm>

“In order for today’s young people to become responsible environmental decision-makers, they must possess an understanding of the ecosystems within which they live and real-world problem-solving skills to practice citizenship within their communities.”

Maine Stewardship Alliance

The Maine Stewardship Alliance combines the concepts of responsible, ethical behavior with natural resource stewardship to create new community-school partnerships around personal and community citizenship. The Alliance encourages the active exploration of natural resource issues through the use of critical thinking skills and involvement in community projects. Students develop the capacity to become involved, informed, and responsible citizens. The Alliance helps educators design and implement programs to be an integral part of the school curriculum, while helping students achieve goals within *Maine State Learning Results, Guiding Principles and Taking Responsibility*. A goal of the Alliance is to aid in the development of responsible stewards by building partnerships between environmental groups, producers, and educators. The Alliance provides assistance to teachers by calling on the expertise of many and varied Alliance partners (such as Project Learning Tree).

Current projects include:

- A partnership with the New England Forestry Foundation (NEFF) to utilize forests managed by NEFF as educational laboratories for local schools, thereby exploring the sustainable management of natural resources.
- Pilot projects in school giving students a framework for learning while exploring natural resource issues.

Contact:

Jim Chandler, Executive Director
46 Road Less Traveled
Bryant Pond, ME 04219
(207) 674-2963
chandler@megalink.net
<http://stewardshipalliance.org>

“Helping the youth of Maine weave a sustainable future.”

Vermont Forests Forever

The Vermont Forests Forever program combines an interactive CD and an educator's guide to help teachers introduce 5th and 6th grade students to the systems and communities of Vermont's forests. The educator's guide contains classroom and field study activities that expand upon ideas presented in the CD's central study areas: Environment, Balance, Products, and Recreation. For each activity, there is a brief introduction, activity ideas, recommended resources, related Project Learning Tree activities, and links to the Vermont Framework of Standards. The guide also contains three activity sheets - *Forest Community Word Search*, *Crossword Puzzle*, and *Design Your Own Forest* - that can be copied and distributed to students. The CD combines video clips, a pre-test and post-test, a virtual forest scavenger hunt, the capability for students to design their own forest on-screen, and hotlinks to cool websites.

Contact:

Beth Ann Finlay, Coordinator
Northern Vermont RC&D Council
617 Comstock Road, Suite 2
Berlin, VT 05602-8498
(802) 828-4595
beth_ann.finlay@vt.usda.gov

Forestry Program of Foxcroft Academy

The Forestry program at Foxcroft Academy (FA) is a three-year high school elective that has an annual enrollment of approximately 25 students. The program is taught by two licensed foresters, Kirby Ellis and Beth Postlewaite, who are members of the Maine Forestry Instructors Association (MFIA). The program is divided between management and harvesting. Forest management incorporates a computer lab dedicated to forestry students for computer aided mapping, forest inventory, growth models and GIS, with strong emphasis given to management decisions and how they impact long-range productivity. Harvesting students build on management ideas, using a harvest as a way to carry out silvicultural prescriptions. Students in this segment are involved in commercial harvesting activities that incorporate Soren Erickson's Game of Logging methods. Proceeds from the harvest's wood sales support the Forestry budget. Students are eligible for Maine's Certified Logging Professional (CLP) certificate upon successful completion of their senior year. FA also has an Articulation Agreement with the University of Maine at Orono and Fort Kent, and Paul Smith's College for student placement and waiving of freshman introductory classes.

Foxcroft Academy is a private school serving the public need. FA has a tuition agreement with SAD 68, which incorporates the towns of Sebec, Dover-Foxcroft, Manson, and Charleston. The Towns of Harmony, Williman, and others also pay tuition to FA for educating their students. Anyone can attend FA by paying tuition of approximately \$4800 per year.

Contact:

Foxcroft Academy
147 West Main Street
Dover-Foxcroft, ME 04426
(207) 564-8893
www.foxcroft.pvt.k12.me.us

Maine Forestry Instructors Association

The Maine Forestry Instructors Association (MFIA) is a group of forestry instructors representing six high school forestry programs in the state. MFIA and other school and career associations work closely with the Maine Department of Education in the area of applied, technical or career based learning. The six schools represented by MFIA can be found below.

Orford Hills Tech School
Al Schaeffer (President MFIA)
PO Box 313, Norway, ME 04268
(207) 743-8914

Forest Tech Center
Dean Merrill
RR2 Box 2580, Farmington, ME 04938

Vocational School - Region 3
Mike Thurlow
17 West Broadway, Lincoln, ME 04457
(207) 794-8596

Southern Aroostook Vocational Education
Dave Libby
P.O. Box 307, Bird Street,, Houlton, ME 04760
(207) 532-9541
www.houlton.com/voced.htm

Region 9 - School of Applied Technology
Marc Dupuis
375 River Road, Mexico, ME 04257
(207) 364-3765

Foxcroft Academy
Kirby Ellis and Beth Postlewaite
147 West Main Street, Dover-Foxcroft, ME 04426
(207) 564-8893
www.foxcroft.pvt.k12.me.us

The Pine Tree State Arboretum

The Pine Tree State Arboretum is a nonprofit, membership organization located on 224 acres of land in Maine's capital city, Augusta. The mission of the arboretum is: "to promote the knowledge and appreciation of trees, shrubs, and other plants for enjoyment, inspiration, and recreation; for scientific research; and for educational and aesthetic purposes."

Plant Collection

The Arboretum has 274 different species or varieties of trees and shrubs. The plant collection includes: Hosta, Azaleas and Rhododendrons, Lilacs, Chestnuts, Green Ash, Urban & Community Forests, Governor's Grove White Pine, Heirloom Apple Orchard, "Space Trees" (from seed that traveled on the Space Shuttle), and a Rock Garden. The forested portion of the Arboretum - 95 acres containing 25 species of native trees - was certified in 1991 as a Tree Farm Demonstration Area, one of only five in the United States.

Education

The Arboretum offers a wide selection of outdoor education programs for Maine students at all grade levels. The Outdoor Education Center is made up of 11 Outdoor Classrooms. Program topics include Arboretum Tour, Tree Identification, Wildlife Habitats, Forestry, Soils & Geology, Wetlands, and Pond Life. Winter programs include Snowshoe Adventure and Nature in Winter. Programs last 1.5 hours (1 mile walk over moderate terrain). Education volunteers are welcome and training is available by the staff. Self-guided tour brochures are available at the trail head kiosks as well as in the lobby of the Viles Visitor's Center. Outreach into the community is available upon request.

Partnerships

Additional educational opportunities are available in conjunction with our partner organizations: Project Canopy, Maine Project Learning Tree, The Maine TREE Foundation, and the Small Woodland Owners Association of Maine.

Contact: The Pine Tree State Arboretum
P.O. Box 344, Augusta, Maine 04332
 (207) 621-0031
 ptsaso@adelphia.net

Gorham Forests Engage Students

Children in Gorham, New Hampshire are connecting with their community and their forests. Rebecca Rule, a Gorham children's author and illustrator, is mentoring local third grade classes in producing a book that will recount the way their town has changed over time. The story will demonstrate how Gorham depends on productive forests and a healthy environment. Staff from the Appalachian Mountain Club and Trailmaster, the project partners, conduct field programs on the northern forest, the paper industry and White Mountain geology for the students. Based on lessons, research and observations, students work with partners to write pieces of the book. The project allows students to learn about their own communities rather than far away places; this fulfills a desire of the third grade teachers to bring learning closer to home. The book will be distributed to community members and at tourist venues.

Contact:

The CO-SEED Project
Center for Environmental Education
40 Avon Street
Keene, New Hampshire 03431-3516
(603) 357-3122 x240
Fax: (603) 357-0718
coseed@anei.org

Camp Treetops/North Country School

Camp Treetops, founded in 1920 among the high peaks of the Adirondack Mountains, provides summer programs for boys and girls aged eight to sixteen. There are a junior camp for children eight, nine, ten and eleven years old, a senior camp for children from twelve to fourteen and two advanced mountaineering programs for children between fifteen and sixteen.

North Country School, which shares the same piece of property as the camp, is a boarding school for children in fourth through eighth grades.

Both Camp Treetops and North Country School are based on a rigorous work program which contributes to the sense of community found there. Campers and students are required to perform chores. Immersion in the working farm and garden is especially essential to life at Camp Treetops and North Country School. Children take part in the process of growing a significant part of the vegetables they eat as well as in raising and taking care of animals destined for the dinner table. Both programs pay special attention to how children relate to their environment. The location in the Adirondack Mountains not far from the Adirondack Forest Preserve ensure that campers and students become familiar with their surroundings and nature in general.

Contact:

Camp Treetops
PO Box 187
Lake Placid, NY 12946
(518) 523-9329
www.nct.org

From A to Z in Sustainable Agriculture: A Curriculum Directory for Grades K-12

This booklet is a well-organized directory of resources and contacts for educating youth about sustainable agriculture, food and fiber systems, natural resources, and their connections to our communities. The booklet offers resources and ideas with such topic headings as “agribusiness,” “animals in agriculture,” “bee-keeping,” “community action,” “cultural awareness,” “energy” and more.

The second index is organized by grade level. According to the book, activities for Grade One would be “A Calf Grows Up,” “A Heritage of Excellence,” “Ag Science in a Kid’s World,” and about 20 other activities.

Each entry in the booklet is described with a letter, showing if the materials are activities, books, standard curricula, guides, manuals, posters, textbooks or videos. A directory of National Sustainable Agriculture Resource Centers and Vermont Educational Centers is another useful feature.

Contact: Elizabeth Seyler, Education Coordinator
Center for Sustainable Agriculture
Division of Agriculture, Natural Resources, and Extension -
University of Vermont
590 Main Street
Burlington, Vermont 05405-0059
(802) 656-0827
eseyler@zoo.uvm.edu
www.uvm.edu/~susagctr/index.html

Life of the Forest

With nearly 20 million acres of forestlands that they own or manage, International Paper (IP) is one of the largest private landowners in the world. International Paper manages its forests under the principles of the Sustainable Forestry Initiative program, a system that ensures the continual planting, growing and harvesting of trees while protecting wildlife, plants, soil, air and water quality. Their “Life of the Forest” educational materials are part of their effort to help students and others better understand the natural cycle of the forest, as well as IP’s role in sustaining that cycle, so that future generations will have the necessary wood fiber for paper and wood products, and forests for recreation. They are also intended to help people learn about the importance of excellent forest stewardship, as well as understand the importance of our sustainable forestlands and their constant renewal.

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