



People and Nature: Our Future is in the Balance

National Wildlife Federation

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Clemson University
A Campus Ecology Collaboration
Clemson, South Carolina
(status of project, Spring 2001)

Group/Class Profile

An interdisciplinary group of students and faculty from several institutions have completed another semester in an ongoing multi-grade collaboration to design and install sustainable schoolyard habitats throughout South Carolina.

Project Goals and Summary

Funded by the Sustainable Universities Initiative (SUI), the project goal is to research, plan, design, and install sustainable landscape/naturescapes for schools, many of whose schoolyards are currently desert-like. Building on the Schoolyard Habitats program and Campus Ecology established by the National Wildlife Federation (NWF) and the South Carolina Wildlife Federation (SCWF), the project focus is to involve both university and K-12 school students in identifying environmental problems, using critical thinking skills to propose solutions, and taking action to effect change. Issues associated with wildlife habitat, curriculum development, transportation efficiency, energy use, recycling, water use, landscape maintenance, and biodiversity are addressed.

Our goals are to research, design, and reflect on sustainable and efficient landscapes, and to brainstorm and take action on issues that can make our universities and schools more sustainable.

One goal of this project is to reach out to a diverse population by sharing information about sustainable community environments. Another goal is to provide an opportunity for students to learn and develop communication skills through participation in a project that has a community impact. Students are working with other students, teachers, parents, volunteers, and administrators in four phases: 1) research, analysis, and information gathering; 2) planning and design; 3) implementation and action; and 4) sharing, reflection, evaluation, and recognition.

Accomplishments

In the past year, Clemson University students have completed designs for Clemson Elementary School, Hunt Meadows Elementary School, East End Elementary School and D.W. Daniel High School in the upstate, Forest Heights Elementary School and Denny Terrace Elementary School in the mid-state, and Dorchester Academy in the lower part of the state. Design students working with Professors Mary Haque, Gina McLellan, and Lolly Tai have had multiple opportunities to practice their presentation skills by presenting their work to various groups and individuals including parent teacher organizations (PTO's), planning committees, television crews, reporters, and colleagues at professional society meetings. The various designs emphasized xeriscape, tree planting for energy efficiency, low maintenance, wildlife habitat, literature gardens, and outdoor learning environments.

Teachers traditionally take the active role, gathering and compiling information, asking questions, and providing answers. Advanced learning, of an active and ongoing kind, can be stimulated by allowing and encouraging students to first, ask important questions, and second, set about exploring new territories by finding their own answers. Once found, the depth of these answers can be measured by giving them to someone else to test and utilize. This project enables students to ask questions, and it stimulates curiosity, promotes interest, improves reasoning, and increases their ability to isolate and define problems.

This project also allows students to discover sources, collect information, analyze data, and solve problems. When asked to communicate solutions to an interested party, students must learn to sift through the information collected, decide what data is most appropriate, and prepare a meaningful presentation for their audience. A sense of accomplishment and satisfaction usually results when students follow this three-part process of asking questions, seeking solutions, and giving answers. The process takes on special significance when taken out of the classroom and placed in the community. Students become teachers, a reversal of roles which many find stimulating.

With supervision from teaching faculty and partner organizations such as NWF and SCWF, students are providing the link to benefit schools, universities, surrounding communities, and most importantly, the students themselves. They are learning

about research, ecology, sustainable lifestyles and landscapes, oral, written, and graphic communication, collaboration, electronic media, and wildlife habitats.

Strategies and Steps Taken

English students enrolled in Professor Burnadette Longo's First Year Composition (English 101) researched and wrote about environmental issues, posted papers to their website, and presented reports and sustainability events. Professional Communication students enrolled in English 851 researched funding sources, wrote letters and proposals requesting funding for the project, and obtained donations of tools to help with project installation. English and Horticulture students wanted to put what they learned into action, and some helped with phases one and two of the sustainable courtyard installation at Hunt Meadows Elementary School led by Dr. Sonja Maki.

Professor Barbara Weaver organized "CommuniCon 2001: Sustaining the Upstate" in April 2001 to provide America Reads tutors and students an opportunity to join community partners to celebrate and share their accomplishments over the year. Clemson tutors and their elementary school students read about environmental issues throughout the year as did Ms. Megan Chandler's English classes at R.C. Edwards Middle School, who were invited to participate in the "Sustainability Fair" held at Littlejohn Community Center. University students from English and Horticulture classes also presented posters together with Dr. Deborah Johnson from the W. Gordon Belser Arboretum at the University of South Carolina and teachers from Forest Heights School in Columbia. CommuniCon 2001 was sponsored by Microsoft Corporation, The Sustainable Universities Initiative, and Landscapes for Learning with help from many additional organizations and individuals. The poster session format allowed students and faculty to present their work, meet others, and discuss their successes and challenges in a celebration enhanced by good food and punctuated by festive music by Dr. Michelle Martin.

Ms. Deborah Johnson, working in cooperation with teachers Fran Rizer and Barbara Dire at Forest Heights School, developed a curriculum reflecting state science standards for elementary schools using Clemson University student designs. Students and faculty have delivered PowerPoint presentations at schools and at professional society meetings. Posters about the project were developed and presented at Earth Day celebrations, service-learning meetings, Landscapes for Learning collaborative meetings, and other appropriate occasions. Several students attended "Habitat Stewards" (NWF) workshops and are working to become certified Habitat Stewards with NWF. Students Jennifer Dukes from Horticulture and Erin Jordan from Landscape Architecture won the Clemson University Service Learning Award for their work on this project.

Role of Campus Ecology

With help, inspiration, and guidance from Campus Ecology and the National and South Carolina Wildlife Federations' Schoolyard Habitats programs, institutions of higher education and K-12 schools are meeting, communicating, and working toward common goals. List serve information provided by Ms. Sara Thieben Green with SCWF has been invaluable.

Publicity and Media

Ms. Julie Totaro representing NWF spoke at the Clemson University Landscapes for Learning "Gardening With Children Symposium" in May of 2001 and gave advice to students and teachers involved with this project.

Documentation

For an in-depth look at student designs, posters, PowerPoint presentations, brochures, and reaction papers, visit Professor Haque's and Professor Longo's websites at:

http://virtual.clemson.edu/groups/hort/courses/sustainable_schoolyards/Designing_SSHs/dssh_ind.html

<http://people.clemson.edu/%7Eblongo/sustainability/susmain.html>

Key Groups/Allies Involved

A colloquium at Clemson University in September of 2000 brought invited speakers Trish Jerman from the Sustainable Universities Initiative, Ed Falco representing the South Carolina Wildlife Federation and Duke Power, and Rick Huffman, president of the South Carolina Native Plant Society, to lecture and brainstorm with students and faculty participating in the project. Students presenting the results of the brainstorming sessions indicated their interest in working towards advancing their knowledge and commitment to environmental stewardship and enhancing other's education through this partnership.

Guest lecturers and critics included teachers, parents, students and administrators from the schools and experts, including Dr. Brenda VanderMey, a sociologist with Landscapes for Learning, Dr. Bill Stringer, an agronomist with the SC Native Plant Society, Ms. Diane Eldridge, a city planner with Upstate Forever, Ms. Georgia Harrison, a landscape architect with Clemson University, Mr. Gene Wilson, an architect from Greenville Technical College, Dr. Don Ham, an urban forester with Clemson

University, and Dr. Delga O'Callaghan, an urban forester from Myerscough College in Lancashire, England. These professionals provided direction, feedback, and evaluation on issues ranging from planning to tree protection at points throughout the design process.

Contacts

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