

MISSION ENVIRONMENT:

By Jean A. Lomino

Using the World as a Lesson Book

Project-based learning, within the framework of outdoor education, can be the catalyst to transform unmotivated students into lifelong learners and, even more importantly, into servant-leaders.



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“OH, GREAT, I THOUGHT, HERE’S another one of those ‘brilliant’ ideas that teachers come up with,” Melissa said, recalling her days as an uninspired 8th-grader. She was making an impromptu speech to several hundred students, teachers, and education officials this past June at the Tennessee State Service Learning Conference, where we had been invited to tell about our environmental service-learning program.

She continued, “But as I started working, I found out it was really fun. It wasn’t long before I actually wanted to stay after school to work! I found out that school was not a torture device, but a place where I could learn and put something back into the community at the same time. I was never an ‘A’ student, but this project made me a lot more interested in school. I realized that I had to be at school every day because I had a job to do, deadlines to meet, and people were depending on me. I even started thinking about careers, and now I’m beginning to think about being a teacher. When I look back at the Wolftever project, I know it made a huge difference in my life.”

Now a high school junior, Melissa had been one of my students when the Wolftever project (later named “Mission Environment”) began. And as I listened to her words, I thought of similar stories from other students during the past three years. Their experiences have convinced me that project-based learning, within the framework of outdoor education, can be the catalyst to transform unmotivated students into lifelong learners and, even more importantly, into servant-leaders.

The Idea Is Born

How did the Wolftever project begin? For several years, my co-teacher, Gerald Linder-

man, and I had been exploring strategies for incorporating our ideas about learning into a 7th- and 8th-grade outdoor education project. We wanted

1. To allow students many opportunities to be outside, to study God’s creation, and thereby develop a deeper appreciation for the Creator and the natural world.

2. To create an opportunity for students to produce something that would have a positive impact on their community—an opportunity for service.

3. To change our curriculum from a shallow survey of many topics to an in-depth study of few areas.

4. To provide an opportunity for students to work as teams and to value the talents of others.

5. To create an environment in which students could construct their own products and their own learning experiences.

6. To create an environment in which the teacher was the facilitator—a “guide on the side” rather than a “sage on the stage.”

7. To provide choices that allowed for individual differences (multiple intelligences).

Experiential Learning

Outdoor education is based upon the belief that direct experiences and authentic learning beyond the classroom walls are the best methods to improve student attitudes and learning.

According to authors Peggy Walker Stevens and Anthony Richards in their article, “Changing Schools Through Experiential Education”: “Experiential education is the process of actively engaging students in an experience that will have real consequences. Students make discoveries and experiment

with knowledge themselves instead of hearing or reading about the experiences of others.”¹ Experiential learning, we decided, must be an intrinsic part of our teaching philosophy.

The Search

Howard Gardner describes the effective teacher as one who “functions as a ‘student-curriculum broker.’”² So Gerald and I became “brokers” in search of a project. We knew what we wanted the learning to look like, but not exactly how to package it. In the spring of 1996, Gerald attended a technology conference in Orlando. There he learned about a student project at Walker Memorial Junior Academy in Avon Park, Florida, which involves monitoring the water quality of local lakes. After hearing their story, we were inspired to do something similar in our area. (See article by Gordon Davis on page 22.)

During the 1950s and early 1960s, Wolftever Creek, which flows through

Collegedale, Tennessee, was badly polluted. Through the combined efforts of local citizens, county, and state agencies, the creek was cleaned up somewhat, but then was largely ignored again. In recent years, trash was visible in the water and along its banks, and there seemed to be a general lack of awareness concerning pollution and its effect on the creek’s water quality. We decided to try to remedy the situation by educating the community about the importance of preserving this natural resource.

The first step, I decided, would be for the students to establish a museum in my classroom featuring the flora and fauna of the creek, the Native American and Civil War history of the area, and the creek’s future.

The Project Begins

We needed the cooperation of local and state agencies, as well as area experts. I contacted the city manager, who told me that a city proposal for building a greenway along the creek had recently

been tabled. If we could inspire support for the greenway, he said, maybe the citizens of Collegedale would get excited about it, too. Now, here was a real mission for my students!

After the project was introduced to the class, students did research on wildlife or plants found along Wolftever Creek. Each student worked with a partner to produce a poster, which we exhibited in the school hallway and later in the museum. We then talked with the students about their talents: that some were good public speakers, others were writers, artists, etc. We discussed the importance of teamwork in accomplishing the goals of our project.

After assessing their individual strengths and interests, the students formed teams: public relations, video production, computer, writing, fundraising, model construction/art, stream biology and collecting, and archaeology. Obviously, some changes occurred as we

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Students examine the spider collection at the class museum.

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progressed. A few students asked to join other teams, or some were assigned to different teams, but as a whole, they identified their capabilities very accurately.

The finance team planned and conducted a fund-raiser to help get the greenway started. The video and writing teams produced a video that was shown to the school board, the church, and the city commission. At the city commission meeting, the students presented a logo for the greenway that had been designed by the art team, along with a \$200 donation.

Students explored the creek many times to study and collect specimens, pick up trash, test water quality, and measure depth and water flow. The art group, with the help of Southern Adventist University professor John Baker, turned one classroom wall into a mural depicting wetlands environments. The history team explored an old mill site on the

creek with a state archaeologist. The computer team created a World Wide Web site. Students wrote and illustrated books for lower-grade children about the animals living around the creek. These books became one of many hands-on exhibits in the museum.

As knowledge of our project spread, other agencies contacted us, including the Tennessee Valley Authority (TVA), the Soil Conservation District, the Chattanooga city planner's office, and local civic clubs. The Chattanooga Riverwalk designer spoke to the students and invited them to help in the design and construction of the Wolftever Creekwalk. A small group of students accompanied TVA biologists conducting a fish survey of the creek. Biologists from the Tennessee Aquarium also invited a group of our students to help with a survey of invertebrates.

As a culminating event, we opened the

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At the class museum, 8th graders discuss with a younger student the similarities between the model of a Native American village and the one that may have existed along Wolftever Creek several hundred years ago.

museum to the public one weekend. More than 200 visitors attended! During the next few weeks, each class in the school was given a tour of the museum, with 8th graders acting as guides.

The Project Continues

The following year, 1996-1997, the students decided to form a legal non-profit corporation, calling themselves "Mission Environment, Inc." Our responsibility as Christians, to keep God's world as clean and natural as possible, was the principle behind our environmental project. The students expressed that theme in their slogan—"Teens Caring for His World." They elected officers and met regularly to plan and discuss the activities of the corporation. Students participated in the first Wolftever Creek Clean-up Day, which is now an established part of the annual Tennessee River Rescue.

The students spoke several times during the year at city commission meetings, the Kiwanis Club, local churches, the Georgia-Cumberland Conference constituency meeting, and the school board. They published a newsletter, *Wolftever Watch*, and appeared on two local TV newscasts. They were also interviewed by a representative of the Tennessee State Service Learning Commission. As a result, "Mission Environment" was one of the 29 organizations listed in the "1997 Tennessee Guide to Service Learning." Meanwhile, water testing, ecology, biology, and research into the history of the creek continued throughout the school year.

In May, Gerald and I, with 12 students, were invited to make a presentation at an international wetlands conference in Alexandria, Virginia, to share how our efforts had made an impact in Collegedale. Our students thus had the opportunity to interact with other young people in the U.S. who were involved in similar projects, as well as government officials, scientists, and concerned people from around the world. Our students came back to school with an expanded vision of what they could do to protect our fragile environment.

This past school year, students continued the work of the corporation by establishing a board of directors that included current 7th and 8th graders, as well as students who had moved on to academy.

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Two students collect specimens for their museum's aquatic-life collection.

Having students at different educational levels work toward a common goal has been an exciting development.

At the end of the year, each student designed and "published" a magazine on the computer featuring a topic related to Wolftever Creek and the activities along its banks, past and present. To locate information about their subject, they conducted interviews, went on field trips, searched the Internet, and did research at the local university library.

During the 1998-1999 school year, the 8th graders are preparing science lessons for younger students to be presented in the museum. The 7th graders are responsible for the design and expansion of the museum. In October, they participated in the third annual creek clean-up. The students of Mission Environment will present programs at area public and private schools about the creek and preserving our natural environment. And they will help the city of Collegedale plan and hold a community event on the banks of Wolftever Creek to help raise funds for the greenway and to create public awareness about the importance of keeping the creek clean.

Conclusion

Did the project fulfill our expectations? Yes, in many ways. (1) The students are excited about learning and producing something that is significant and real. (2) They love being involved in a project that can make a difference in the community. (3) Many are developing a genuine interest in areas that could very well become future careers. (4) Learning has turned into investigation, which has led to student discoveries. (5) Students have developed leadership, organization, public speaking, time management, and other skills. (6) In addition to building strong relationships with their teachers, students have also had opportunities to develop professional relationships with experts in many fields. (7) Our students have gained an increased appreciation for God's creation, and better understand their roles as earth's caretakers. (8) They are learning what it means to be servant-leaders.

Anne Lieberman, in the April 1995 issue of *Phi Delta Kappan*, wrote: "What everyone appears to want for students [is] a wide array of learning opportunities that engage students in experiencing, cre-

ating, and solving real problems, using their own experiences, and working with others.”³

Not only has our project met these criteria, but it has also convinced me that the study of the natural world makes a perfect hook for all learning experiences. In the book *Education*, Ellen White wrote, “To him who learns thus to interpret its teachings, all nature becomes illuminated; the world is a lesson book, life a school.”⁴ I am excited about being able to help create an atmosphere in which these purposes can be realized, and where the love of learning can grow and flourish. ☞

Jean A. Lomino has taught and served as a principal in denominational church schools for 20 years. For the past eight years, she has been the language-arts teacher for grades 7 and 8 at the A. W. Spalding School in Collegedale, Tennessee. She is also an Adjunct Professor for the School of Education and Psychology at Southern Adventist University, also

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Older students show a younger pupil a creature that lives in a rotten log—one of the museum’s most popular exhibits.

in Collegedale. Ms. Lomino has been a presenter at Georgia-Cumberland Conference conventions, a national wetlands conference, and the Tennessee State Service Learning Conference. Along with her co-teacher, Gerald Linderman, she has received several awards for the Wolftever project, including the 1996 Hamilton

County Conservation Teacher of the Year Award, the 1997 Georgia-Cumberland Conference Innovative Teaching Award, and the 1998 Chattanooga Environmental Education Alliance Educator of the Year Award. She is also a Tennessee state workshop facilitator for Project WET. Mrs. Lomino is in the process of developing and publishing an outdoor education curriculum as part of her doctoral program in Leadership at Andrews University. She can be reached by E-mail at jalomino@southern.edu.

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2. Howard Gardner, *The Unschooled Mind: How Children Think and How Schools Should Teach* (New York: BasicBooks, 1991), p. 246.
3. Ann Lieberman, “Practices That Support Teacher Development,” *Phi Delta Kappan* 76:8 (April 1995), p. 591.
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How to Build an Environmental Project

1. *Discover a need in the community.* If you decide, as we did, that environmental issues provide the necessary elements for a project that will engage student curiosity and create enthusiasm, you don’t have to look far for a cause. All of our natural areas and resources are in jeopardy. What’s near your school? Look at water sources—streams, rivers, lakes, ponds, wetlands, or the seashore. All habitats, including prairies, woodlands, and desert areas, as well as the wildlife and plants that are found there, need to be protected and, in some cases, re-established.

2. *Research.* Once the class chooses a theme, let the students research related topics. The library, interviews with local residents and experts, the Internet, and surveys are all excellent resources. Students can produce posters, magazines, stories, research

reports, models, collections/exhibits, videos, and oral presentations based on their research.

3. *Network.* Provide opportunities for your students to network with local experts, as well as county, city, state, and government agencies. This is a great opportunity to teach letter-writing and E-mail skills. Once other people learn about your mission, they will be happy to help you by providing resources, guest speakers, publicity, and even funding.

4. *Visit and explore your area of study often.* Let students adopt sections of your study area to assess, evaluate, map, and clean up.

5. *Share your concerns with the community.* Let students use their imagination to build community awareness of their issues. They can make presentations to churches, the school

board, civic clubs, and other schools. These presentations can take the form of speeches, slide presentations, PowerPoint programs, skits, and puppet shows. Students can also produce newsletters, radio and TV spots, posters, and Web pages.

6. *Attend workshops and conferences.* Find out about workshops and conferences related to your project, and respond to invitations for presenters. These are wonderful opportunities for students to develop leadership and interpersonal skills.

7. *Present student programs.* Invite parents and members of the community to your school to see what the students have accomplished. Assign the program planning and publicity to the students. Use this opportunity to celebrate the excitement of learning and serving others. — **Jean A. Lomino.**