EVALUATION

of the

Delta Volunteers
Environmental Stewardship Project

Final Report
covering the activities during
2004

Prepared by:

Alan Barton, Ph.D.
Division of Social Sciences
Delta State University

December, 2004

A Program Evaluation Report from the
Delta Center for Culture and Learning

Funding for the Delta Volunteers Environmental Stewardship Project is provided by:

Entergy
THE POWER OF PEOPLE™

The Entergy Corporation

The Delta Volunteers Environmental Education Project is a Collaboration Between:

Delta State University

Delta Volunteers
Delta Center for Culture & Learning
Delta State University

Cypress Park Elementary School
Cleveland School District

U.S. Fish & Wildlife Service

Dahomey National Wildlife Refuge
U.S. Fish and Wildlife Service
Department of the Interior

EXECUTIVE SUMMARY

The Environmental Stewardship Project, a collaboration between the Delta Center for Culture and Learning's Delta Volunteers, Delta State University, Cypress Park Elementary School, and Dahomey National Wildlife Refuge, programmed several activities for the 2003-04 school year that engage elementary, secondary and college students from the Cleveland, MS, area in a variety of environmental education and community service activities. During the Spring semester, 2004, efforts focused on students at Cypress Park Elementary School. Cypress Park fourth graders visited the Earth Lab at Canton, MS, for a three-day environmental education workshop. They also learned about the conditions necessary for life using a life boxes exercise, and raised butterflies in boxes, which they later released in their butterfly garden.

The project's environmental educator also coordinated a number of undertakings for Dahomey National Wildlife Refuge. Two kiosks were constructed by students at the Vocational-Technical High School in Cleveland, MS, to be used for interpretive displays at Dahomey. Five interpretive boxes were assembled for use by school groups visiting the refuge. These boxes contain books, binoculars, and specimens on five topics: mammals, migratory birds, reptiles, wetlands, and trees. In addition, a poster featuring Dahomey NWR was created and distributed to schools in three counties near the refuge. These projects continued through the spring and summer of 2004, and the kiosks were still in progress at the end of 2004.

Evaluations of the various projects were conducted through surveys with participants, observation of activities by the evaluator, and interviews with key project leaders. The evaluations were generally positive. Teachers, students and administrators at Cypress Park Elementary responded very positively to the visit to the Earth Lab, finding it enjoyable and educational. Earth Lab instructors rated the Cypress Park group as typical of elementary school groups that visit their camp. The Refuge Manager at Dahomey and the project's environmental educator were pleased with the materials created for the refuge, in general. Several logistical difficulties arose in the delivery and installment of the kiosks, which frustrated both the Refuge Manager and the environmental educator.

The project began with a service learning focus; however, two key individuals left the project shortly after it began in the Fall of 2003. This led to a change in emphasis away from service learning, with more focus on environmental education. The activities were directed more at Cypress Park students, and away from students at Delta State University. A planned activity to build the kiosks at Dahomey using students from Delta State and the Vo-Tech High School shifted into an environmental education field day, contributing to the difficulties getting the kiosks constructed. The trip to the Earth Lab was not included in the original project plan, and this also diverted resources away from service learning activities oriented around Dahomey NWR.

Despite this shift in emphasis, the Environmental Stewardship Project enjoyed many successes. The environmental educator did an admirable job, and despite the challenges, Dahomey benefited materially from the project. Participants from all groups gave the project high marks overall in their evaluations.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

EVALUATION OF THE DELTA VOLUNTEERS ENVIRONMENTAL STEWARDSHIP PROJECT

Final Report

PART I: INTRODUCTION

This report presents results of an evaluation of the Delta Volunteers' Environmental Stewardship Project, focusing on the activities during 2004. The premier activity during this period occurred the week of April 5, 2004, when fourth grade students and teachers from Cypress Park Elementary School (CPES) in Cleveland, MS visited the Earth Lab environmental education camp in Canton, MS. The opinions of participants in this activity are presented in this report, based on surveys with each group. Other activities during this period included classroom activities at CPES using life boxes and raising butterflies, the construction of interpretive kiosks for Dahomey National Wildlife Refuge (DNWR), and the development of posters and information boxes for DNWR. These activities are documented and briefly evaluated. A final evaluation of the year-long project is also presented, based on comments from surveys and interviews with program participants.

I.1 The Environmental Stewardship Project

The Environmental Stewardship Project began with a grant awarded to the Delta Center for Culture and Learning at Delta State University (DSU) by the Entergy Corporation. The Delta Center's Delta Volunteers project organized a collaborative environmental education project that focused on students from Cypress Park Elementary School in Cleveland. Several projects were carried out in collaboration with nearby Dahomey National Wildlife Refuge. High school and college students in Cleveland participated in project activities as well, to a lesser extent. The overarching goals of this project were to raise awareness of wildlife and environmental issues among students, to introduce students to community service, and to provide material benefits for DNWR, including a series of interpretive kiosks for the refuge and environmental education kits for visitors and school groups to use.

I.1.i Fall 2003 Activities

The Environmental Stewardship Project was initiated in the fall of 2003. Due to unforeseen circumstances, the project changed its focus soon after it began. The project was originally conceived to feature a service-learning approach to education, in collaboration with Cypress Park Elementary School's "SALLY" after-school program. Shortly after the Delta Volunteers received the grant for this project, however, the SALLY program's annual funding was not renewed, and the SALLY coordinator had to leave for another position. The Environmental Stewardship Project had intended to hire an environmental educator, but with the loss of the SALLY coordinator, the environmental educator essentially took over management of the project. Consequently, the project shifted its focus away from service-learning and

towards a more traditional environmental education approach, in line with the experiences of the environmental educator.

The most significant project undertaken during the fall semester, 2003, was the "9/11 Week of Service." DSU students and DNWR personnel visited CPES and assisted elementary school students in a variety of environmental projects, including building bird and bat houses, constructing a butterfly garden on the school grounds, and decorating paper bags for distribution at local supermarkets. This project had a significant service-learning component, evident in the participation of DSU classes; however, the shift to a more traditional environmental education approach emerged in the second project of the fall semester, a field day at Dahomey National Wildlife Refuge. Originally this was conceived as a day to construct and erect a set of informational kiosks for the refuge, in conjunction with students from CPES and Cleveland's Vocational-Technical High School. Under guidance from the environmental educator, the focus shifted to a field day in which Cypress Park fourth graders visited the refuge and participated in various educational activities put on by the refuge and representatives from the Mississippi Museum of Natural Science, the Mississippi Department of Wildlife, Fisheries and Parks, and Keep Mississippi Beautiful. During the fall semester, the environmental educator also initiated projects that would be carried out during the spring, including the construction of interpretive kiosks, the life boxes, and the Earth Lab field trip.

A complete evaluation of the fall, 2003 activities is available in the Midterm Report for the Environmental Stewardship Project.[1]

1.2 Earth Lab Environmental Education Camp

The most significant activity during the Spring semester, 2004, was a three-day visit to an environmental education camp. From April 5–7, 2004, CPES fourth graders visited the Earth Lab at the Duncan M. Gray Center near Canton, MS, a program of the Episcopal Diocese of Mississippi. The Earth Lab staff offer participating groups a choice of thirty-six topics of study. The CPES group selected eight of these: mammals, birds, insects, Native American values, alternative energy sources, litter prevention, and two nature hikes.

I.3 Interpretive Boxes and Posters for Dahomey National Wildlife Refuge

The Environmental Stewardship project created five interpretive boxes for Dahomey National Wildlife Refuge. These boxes contain a variety of educational materials and tools, and were designed to be used by school groups visiting the Dahomey refuge to learn about the area's natural features. Schools may

[1] See Alan Barton. *Evaluation of the Delta Volunteers Environmental Stewardship Project: Midterm Report, covering the activities during Fall, 2003*. A Program Evaluation Report from the Delta Center for Culture and Learning, Delta State University, Cleveland, MS. January, 2004. This report can be viewed on the World Wide Web at:
<http://ntweb.deltastate.edu/vp_academic/abarton/Research/EnvStewEval/Midterm Report.pdf>.

also check these boxes out to use in conjunction with environmental education programs in the classroom.

The Environmental Stewardship project also created educational posters to be distributed to superintendents in three county school districts (Washington, Bolivar and Sunflower). The posters were titled "Migratory Birds at Dahomey Wildlife Refuge." These handsome educational posters describe characteristics of migratory birds, identify some migratory birds found at Dahomey National Wildlife Refuge at different times of the year, and highlight resources available to teachers through Dahomey NWR. The posters are illustrated with a photo of two ducks, a photo of a school group visiting Dahomey NWR, and the Fish and Wildlife Service logo. The posters were printed on recycled paper.

I.4 Information Kiosks for Dahomey National Wildlife Refuge

In a service-learning project that combined students from the Cleveland Vocational-Technical high school and DNWR, the Vo-Tech students constructed two kiosks for interpretive displays on the wildlife refuge. One of the kiosks has a three-panel display, while the other has a two-panel display. The U.S. Fish and Wildlife Service (USFWS) developed maps and informational posters to be displayed on the kiosks.

I.5 Life Boxes Classroom Activity

The environmental educator coordinated a project to put life boxes in the fourth grade classrooms at CPES. These were placed in the rooms in January, 2004. The educator and her assistant then led an activity in the classrooms in which they instructed the students about the conditions necessary for life.

I.6 Butterfly Boxes and Garden

During the "9/11 Week of Service," the participants created a butterfly garden at Cypress Park Elementary School. During the Spring semester, the fourth grade classes had butterfly boxes, in which they watched caterpillars turn into butterflies, then released the butterflies in the garden behind the school. This activity allowed them to observe nature's changes up close.

PART II
EVALUATION OF THE EARTH LAB VISIT

The visit to the Earth Lab environmental education camp was the most significant activity undertaken by the Environmental Stewardship Project during the Spring, 2004. A complete evaluation of this activity is described in this section.

II.1 Earth Lab Program

The Earth Lab is located at the Duncan M. Gray Center in Canton, MS. The Gray Center is operated by the Episcopal Church. The Earth Lab runs a comprehensive and integrated environmental education program, with professional instructors that offer hands-on, experiential classes on a variety of conservation-related themes. The Earth Lab offers housing and food to the participating school groups. Some classes are held entirely out-of-doors, while others make use of on-site classroom facilities. The classrooms have various museum collections of stuffed animals and birds, as well as instructive posters and other environmental education materials. They are clearly set up to encourage hands-on learning. The Earth Lab also features an "Eco-House" on-site. This unique structure demonstrates how housing can incorporate ecologically-friendly design and technologies.

Visiting school groups select the themes they wish to study from a list of about 35 that the Earth Lab offers. The group is broken down into subgroups which rotate through the selected classes; by the end of the program, all students have attended all classes.

II.1.i Preparations for The Earth Lab Visit

Preparations for the CPES visit to the Earth Lab began in the Fall semester, 2003. This visit did not use any of the program funds provided by the Entergy Corporation.[2] Instead, funds were raised to support the trip. Most of the planning and logistics associated with the visit were handled by the environmental educator. The environmental educator dedicated a significant amount of time to fundraising for this trip, beginning in the fall, and continuing through the entire period leading up to the actual visit.

The environmental educator held a meeting for the parents of fourth graders at CPES on Feb. 2, 2004. Due to a conflict, the evaluator was unable to attend. At this meeting, the environmental educator explained to the parents about the site, the camp program, and logistics for the visit. Most of the parents of fourth grade students attended this meeting.

II.1.ii The CPES Earth Lab Visit

Three fourth-grade classes from Cypress Park Elementary School attended the Earth Lab between April 5 and 7, 2004. They traveled to the Earth Lab in a bus chartered from Delta State University. The

[2] The Entergy Corporation did donate additional funds that were used to pay for the bus to transport the children from Cleveland to Canton.

students stayed in the rustic cabins on-site, and ate their meals in the Earth Lab dining hall. Students slept in large common rooms on bunk beds, in sleeping bags they brought with them, and they used common bathrooms. Teachers and other leaders slept in smaller rooms adjacent to the student sleeping area. For many CPES students, this was the first time they had spent the night away from their family, and perhaps the first time they had slept in a camp situation.

The students spent their days attending classes. The CPES program consisted of eight classes, selected by CPES teachers and the environmental educator. The themes for the CPES classes were:

(1) "Beaks, Feathers and Talons," a classroom orientation to birds;
(2) "Alternative Energy," an outdoor activity about solar and other energy sources, which included using a solar oven and visiting the Earth Lab's own "Eco-House;"
(3) "All About Animals," a classroom activity in which the students learn about local mammals and view stuffed animals in the Earth Lab's museum;
(4) "Touch the Earth Softly," an outdoor nature walk that features a Native American approach to interacting with the environment;
(5) "Lake Walk," a nature hike around the lake adjacent to the environmental education center;
(6) "Insects," a classroom activity that builds an appreciation for insects in the region;
(7) "Night Hike," a nighttime nature hike, in which the students learned to call owls and participated in other activities;
(8) "Litter," a course in which students were shown the negative aspects of littering.

In addition to the hands-on classes, the Earth Lab incorporates many lessons into the children's daily activities. For example, at each meal, children are encouraged to take as much food as they wish, but they must eat everything they take. Leftovers are collected for each table and weighed, and a tally is kept to assess how well each table is meeting this ideal.

II.2 Evaluation Methods

An evaluation of the CPES Earth Lab program was conducted in the weeks following the visit.

II.2.i Study Design

Four techniques were used to evaluate the Earth Lab visit. First, a survey was taken of fourth grade students and teachers at Cypress Park following the visit to Earth Lab. Second, a survey of Earth Lab staff participating in the Cypress Park program was taken. Third, the evaluator visited the Earth Lab during the visit by Cypress Park and observed the students engaging in activities at the camp. Fourth, interviews were conducted with leaders in the program, including the environmental educator, Earth Lab staff, and the principal at Cypress Park.

II.2.ii Data Collection

Surveys

Three survey questionnaires were distributed as part of this evaluation. The questionnaires were given to CPES fourth grade students and teachers, and to Earth Lab instructors. See Appendix A for all of the questionnaires used in this evaluation.

A survey was distributed to all members of the fourth grade classes.[3] The questionnaire asked the student his/her gender and age, and included four questions on the Earth Lab visit. The students were asked to evaluate how much fun they had at Earth Lab, how much they learned at Earth Lab, whether they will change their actions based on information they learned at Earth Lab, and to describe the most important thing they learned at the Earth Lab. In addition, the questionnaire asked three general questions about the entire environmental stewardship project. Students were asked to choose which environmental stewardship activity was the most fun,[4] which was the most educational, and to name the lesson that they learned from this project that they would remember the longest.

A survey was also distributed to the three CPES teachers who attended the Earth Lab camp with their classes. This questionnaire had twelve items. The first four gave a statement, then asked the teacher if she strongly agreed, agreed, disagreed, strongly disagreed, or had no opinion on the item. The statements were:

- I believe that the environmental education camp at the Earth Lab was valuable to my students
- I believe my students enjoyed the environmental education camp at the Earth Lab
- I believe my students found the environmental education camp at the Earth Lab educational
- I believe I benefited from participating in the in the environmental education camp at Earth Lab

The CPES teachers were then asked three open-ended questions about the Earth Lab visit. These questions were:

- What was the most important thing your students learned at the Earth Lab?
- What was the biggest challenge or problem you encountered at the Earth Lab?
- Provide any further comments about the Earth Lab visit

The questionnaire continued with an assessment of the entire Environmental Stewardship Project. The teachers were asked to rank the projects from most enjoyable to least enjoyable, using the same five choices as the students (See footnote 3). The teachers were also asked to rank the projects from most educational to least educational, with the same five projects. Finally, the teachers were asked three open-ended questions about the whole Environmental Stewardship Project. The first asked the most

[3] Those whose parents had not provided permission at the beginning of the school year were excluded.
[4] The choices were the "9/11 Week of Service," the butterfly boxes and garden, the life boxes in their classroom, the Earth Lab camp, and the field day at Dahomey NWR. These choices were given to two questions, pertaining to the most fun and most educational activity during the school year.

important lesson her students learned from the environmental projects during the school year; the second asked the biggest challenge associated with the environmental projects; and the third asked the teacher for any further comments on the Environmental Stewardship Project.

A survey was also distributed to the instructors at the Earth Lab camp. This questionnaire had ten items. The first three gave a statement, then asked the instructor if he/she strongly agreed, agreed, disagreed, strongly disagreed, or had no opinion on the item. The statements were:

- I believe that the Earth Lab environmental education camp was valuable to the Cypress Park Elementary School students
- I believe the Cypress Park Elementary School students enjoyed the environmental education camp at the Earth Lab
- I believe Cypress Park Elementary School students found the environmental education camp at the Earth Lab educational

The next four questions asked the instructor to rate the CPES group on a 3-point scale: better than average, average, worse than average. The four items were:

- Preparation prior to camp;
- How much they learned at camp;
- Behavior at the camp;
- Overall performance

Finally, the instructors were asked three open-ended questions:

- What was the most important thing CPES students learned at the camp?
- What was the biggest challenge or problem you encountered with CPES students?
- Any further comments on the CPES visit to Earth Lab

Observation

The evaluator visited the Earth Lab camp to observe the CPES students on the morning of April 7, 2004. I joined the students for breakfast, toured the cabins and the grounds, and attended several classes, including the bird class, the mammal class, the "Touch the Earth Softly" hike, and the alternative energy class, including a visit to the EcoHouse. I was able to speak with several members of the Earth Lab staff informally during this visit, and they freely shared information about their operations. I also engaged in informal conversations with the environmental educator, her assistant, and the CPES teachers, and observed their interactions with the kids.

Interviews

After the Earth Lab trip, I interviewed the principal at Cypress Park Elementary about the environmental education camp, and about the Environmental Stewardship Project. I also carried out an extended interview with the environmental educator about the camp visit and the overall project. Finally, I

Table 1:

Characteristics of Cypress Park Elementary School Fourth Graders Participating in the Earth Lab Camp Evaluation Survey; Age and Sex (Percent of Total)

		Age				
		9	**10**	**11**	**12**	**Total**
Sex	**Female**	8.7	34.8	6.5	4.3	54.3
	Male	8.7	21.7	13.1	2.2	45.7
	Total	17.4	56.5	19.6	6.5	100.0

interviewed the Refuge Manager at Dahomey National Wildlife Refuge about the overall Environmental Stewardship Project. Each of these interviews was recorded and analyzed for salient themes.

II.2.iii Data Analysis

The information collected in the surveys consisted of quantitative data collected from closed-ended questions, and text from the open-ended questions. Frequency distributions were developed from the closed-ended questions, and the results are presented below. Some of the information was cross-tabulated, as well. The text was typed, categorized, and is used to highlight or illustrate points.

II.3 Results and Discussion

Forty-seven fourth graders completed the follow-up survey given after they returned from the Earth Lab. Of these, forty-four had attended the Earth Lab camp; three were unable to attend but completed the other parts of the survey. Table 1 summarizes information about the students that participated in the evaluation survey. Among the respondents, slightly more were females than males, and over half of the respondents were ten years old. They ranged in age from nine to twelve.

In addition to the students, three fourth grade teachers attended the Earth Lab and completed questionnaires on their experiences. Five Earth Lab instructors completed follow-up surveys as well.

II.3.i Perceptions of CPES Students

Overall, the CPES students expressed a very positive assessment of their visit to the Earth Lab (See Table 2). Ninety percent of the students rated the activities a lot of fun, and over three-fourths said they learned a lot at the Earth Lab. No students said the visit was not much fun, nor that they didn't learn very much. Eighty percent of the students said they would change their behavior a lot due to their visit to the

Table 2:
Perceptions of CPES Students on their Visit to the Earth Lab
(Percent)

	Not Much	Some	A Lot
How Much Fun Were the Earth Lab Activities?	0.0	9.1	90.9
How Much Did You Learn at the Earth Lab?	0.0	22.7	77.3
How Much Will You Change Your Behavior Based on Lessons You Learned at Earth Lab?	2.3	18.2	79.5

n = 44; Missing = 3

Earth Lab, and an additional eighteen percent said they would change their behavior some. See Appendix C for full results.

II.3.ii Perceptions of CPES Teachers

The CPES fourth grade teachers responded very favorably to the Earth Lab camp. All three strongly agreed with each of the following statements: "I believe that the environmental education camp at Earth Lab was valuable to my students," "I believe my students enjoyed the environmental education camp at the Earth Lab," "I believe my students found the environmental education camp at Earth Lab educational," and "I believe I benefited as well from participating in the environmental education camp at the Earth Lab." Results are displayed in Appendix B.

II.3.iii Perceptions of Earth Lab Instructors

The Earth Lab instructors also held generally positive impressions of the CPES camp (Table 3). All of the environmental educators at the Earth Lab strongly agreed with the statement "I believe that the Earth Lab environmental education camp was valuable to the Cypress Park Elementary School students." All of the

Table 3:
Perceptions of Earth Lab Staff Regarding CPES Students
(Percent)

	Strongly Agree	Agree
Earth Lab camp was valuable to CPES students	100.0	0.0
CPES students enjoyed the Earth Lab camp	80.0	20.0
CPES students found the Earth Lab camp educational	60.0	40.0

n = 5; Missing = 0

Table 4:
Perceptions of Earth Lab Staff Comparing CPES Students to Other Visitors
(Percent)

Rating of CPES students compared to similar groups that have attended the Earth Lab camp:	**Better Than Average**	**Average**	**Worse Than Average**
Preparation prior to camp	40.0	40.0	20.0
Amount learned at the camp	20.0	80.0	0.0
Behavior at the camp	0.0	80.0	20.0
Overall performance	20.0	60.0	20.0

n = 5; Missing = 0

instructors agreed with the statement "I believe the Cypress Park Elementary students enjoyed the environmental education camp at the Earth Lab;" four of these (80%) indicated that they *strongly* agreed with the statement. All of the instructors also agreed with the statement "I believe Cypress Park Elementary School students found the environmental education camp at the Earth Lab educational;" three of these (60%) indicated that they *strongly* agreed with the statement.

The Earth Lab instructors were also asked to rate the CPES group in comparison to similar groups that have attended the Earth Lab environmental education camp. Results are shown on Table 4. Generally, the consensus seemed to be that the CPES group was similar to other school groups. Two respondents (40%) rated the CPES group "average" in terms of their preparation prior to the camp, two rated the group "better than average," and one (20%) rated the group "worse than average." Four respondents (80%) rated the group "average" in terms of how much they learned at the camp, and one (20%) rated the group "better than average." Four respondents (80%) also rated the group "average" in terms of their behavior at the camp, while one (20%) rated the CPES students "worse than average." Finally, three of the Earth Lab instructors (60%) said the group's overall performance was "average," while one (20%) said it was "better than average," scored it "worse than average."

Full results for the survey of Earth Lab instructors are shown in Appendix D.

II.3.iv Evaluator Observations

On my visit to the Earth Lab, I observed the students at breakfast, and engaged in several classes, including the bird class, the mammal class, the alternative energy class, and the "Touch the Earth Softly" hike. The students were clearly very excited to be participating in all of these activities and it was difficult for many to contain their excitement, particularly in the classroom activities where they squirmed a lot. The instructors at the Earth Lab handled these situations well; obviously they had substantial experience

in such matters. The students were more at ease in the outdoor classes. They were very interested in the alternative energy class, which involved hands-on activities such as starting a fire with a magnifying glass, and demonstrations of solar-powered appliances. The students also clearly enjoyed the visit to the "EcoHouse" and behaved well when inside the house.

The "Touch the Earth Softly" nature walk involved a hike through the forest near the camp, during which the students remained completely silent, as instructed by the leader. They paused along the way and viewed different aspects of nature, without speaking. The group that I observed took this as a challenge, and remained silent during the whole walk; however, comments by the Earth Lab instructor suggested that this wasn't the case with all of the CPES groups. At the end of the hike, the students engaged in an activity that involved face-painting, and a "capture-the-flag" style game. They were clearly glad to get some of their energy out in this game, and appeared to really enjoy it.

My impression of the Earth Lab instructors was they were patient, professional, and very dedicated to what they do. They followed a well-designed program, and could communicate to the children in positive ways. For the most part, they were able to maintain order and discipline, despite the children's excitement and exuberance. The CPES teachers, the environmental educator, and her assistant assisted in discipline, as well.

I also believe that the CPES teachers benefited from this visit to the Earth Lab. They were as interested in some of the programs as the students.

II.3.v Interviews

Interviews with the CPES principal and the environmental educator also produced positive comments on the trip to the Earth Lab. The CPES principal said:

> "I think it was absolutely amazing how excited they were. The kids learned a lot, they did not have discipline problems, because they were busy – I know they laughed and joked about how hard it was to get them to bed! I know they had a great time."

She said that she got positive comments from both students and teachers, and had not had one complaint or negative comment about the trip. She told how one of the students came up to her the day after they returned to tell her very sincerely how much she loved the trip. The principal said it is things like this that make the whole experience worthwhile.

The environmental educator said:

> "The kids were really excited. I think they really enjoyed the Eco House. I just think it was a wonderful thing for them to get to see."

During the interview, the environmental educator shared some letters she had received from the fourth graders at CPES (See Appendix E). The letters generally thanked the environmental educator and Earth Lab staff, recounted favorite moments or classes, and expressed how much fun the kids had at the environmental education camp. Typical sentiments expressed in the letters are captured in these two examples:

> "I enjoyed myself at Earth Lab. I liked when we played games with Ms. Ruth. I also liked when we made a little stick catch on fire with the sun. I was so excited when we saw the foxes. I learned about a lot of things. I want to thank all of you for helping me learn how to take care of animals!"

> "I had a great time at Earth Lab. It was so fun that I wanted to stay there. I thank you for giving us the opportunity to go to the Earth Lab. The things I liked best were when Ruth took us riding to the Eco House, when we went fishing with Joe, when we called the owls, and most of all when we had a campfire! Thank you for everything you did for us."

One student even offered this explanation as an apology of sorts:

> "I had a good trip to Earth Lab. If we were trouble, I'm sorry. I can't control myself from being bad."

The environmental educator also published an article in the *Mississippi Episcopalian* about the visit. This newsletter is sent to all members of the Episcopal Church in Mississippi.

While expressing the value of the Earth Lab visit, both the principal and the environmental educator also noted that the trip presented the biggest challenge as well. Both mentioned the logistics and planning inherent in such a large undertaking. Since it was the first time students had taken an overnight field trip, there was also some education necessary to get some of the parents on-board. This was cumbersome and time-consuming. The principal also noted that a few of the students were not able to attend the Earth Lab, primarily for health reasons, and this was unfortunate, as these students would miss out on an activity that obviously was very significant to the other students. The principal did say she would do it again in a second, and she hopes they can make a visit to the Earth Lab an annual trip.

II.4 Conclusion

The visit to the Earth Lab was a significant undertaking that was conceived by the environmental educator, and occupied a substantial amount of the time and energy that she dedicated to the Environmental Stewardship Project. She spent many hours working on fundraising, not to mention all the effort that went into planning and coordinating the trip. The environmental educator worked very hard, and much of the success of the trip is the product of her efforts. The evaluations of this visit, from all sources, were very positive.

The Earth Lab trip represents the shift in focus of the Environmental Stewardship Project away from a service learning emphasis and towards a traditional environmental education format. This resulted directly from the change in leadership in the project at the very beginning. The Earth Lab trip would not have happened without the contributions and efforts of the environmental educator. Several people attached to CPES have expressed interest in having the fourth grade class visit the Earth Lab again next year. This will likely depend on finding sufficient funding and someone with the energy of the environmental educator to make it happen.

PART III
EVALUATION OF OTHER ACTIVITIES

Other activities carried out during 2004 included life boxes and butterfly boxes in the fourth grade classrooms at Cypress Park Elementary School, the construction of kiosks for Dahomey National Wildlife Refuge, and the design of posters and interpretive boxes to be used in environmental education programs at DNWR. Because of the nature of these projects, a systematic evaluation was not undertaken. A description of each project is included here, and comments are extracted from the surveys and interviews.

III.1 Life Boxes

The environmental educator took life boxes to the CPES fourth grade classrooms during January, 2004. These were used for demonstrations to instruct the students on the conditions necessary for life on Earth, in preparation for their visit to the Earth Lab. They showed the students a box with soil and water in it, then asked the students to fill out a card with everything they saw in the box. Eventually, they were able to establish that the box contained not only soil and water, but also light and air. The students then planted seeds in the box, and kept notes on the project. This demonstration helped the students understand and remember the conditions necessary for life.

III.2 Butterfly Boxes

Butterfly boxes were delivered to the CPES fourth grade classrooms in March, 2004. The students were able to observe butterflies develop from larvae, then released the butterflies in the garden they had prepared during the fall semester. The environmental educator and her assistant also taught two programs on butterflies at CPES, and the fourth graders put on a program about raising the butterflies to two community groups.

Many CPES fourth graders expressed appreciation for what they learned from having butterfly boxes in their classroom. When asked what would be their most enduring lesson from all of the environmental stewardship activities, many responded it was learning about the life cycle of the butterfly.

Numerous students commented on the educational value of the butterfly boxes. One student said:

> "I will remember the butterfly boxes and garden. It was a very fun experience for me. I will never forget it."

Another said:

> "I will always remember the life cycle of the butterflies and how we watched them grow."

A third student noted:

> "The lesson I will remember forever is that you should never kill every little bug you see."

These students' enthusiasm for this project was supported by one of the fourth grade teachers. In response to a question about the most important lesson the students learned from the environmental stewardship project, this teacher said:

> "My students enjoyed watching the life cycle of the emerging butterflies! It was awesome!"

III.3 Kiosks at Dahomey National Wildlife Refuge

High school students at Cleveland's Vocational-Technical High School worked on two kiosks to be installed at Dahomey National Wildlife Refuge. The students constructed two large kiosks, one with three panels and one with two panels, using donated materials. These wood structures are designed to display maps, posters, and literature about the refuge to form interpretive displays for visitors.

The students completed the kiosks during the spring semester, but logistical problems delayed installation of the kiosks. Transporting the kiosks to the refuge was difficult, given their large size. It was also necessary to dig holes in the ground at the refuge in order to erect the kiosks, but these required special machinery and cooperative weather conditions. Coordinating all of these activities was logistically very challenging.

At the time of this report, one of the kiosks had been delivered to Dahomey NWR and was erected, but was not complete (See Figure 1). The other kiosk remained on a trailer at the Vo-Tech school. The Fish and Wildlife Service office in Grenada had taken responsibility for transporting and installing the kiosks. The USFWS was preparing the informational materials to be displayed on the kiosks, and the refuge manager said these currently were in the possession of the environmental educator. They were having trouble getting brackets that would hold the panels to the structure. The environmental educator expressed consternation that this project had been delayed, and the Dahomey refuge manager was also frustrated at the time it was taking to install the kiosks. Once the kiosks are finished, the environmental educator intends to have a public ceremony to dedicate them.

III.4 Interpretive Boxes and Posters for Dahomey National Wildlife Refuge

Five interpretive boxes were created (See Figure 2). The themes were trees, mammals, reptiles, wetlands, and migratory birds. The Environmental Stewardship Project acquired materials for these boxes through purchase and donation. Once all financial obligations were met, the environmental educator planned to spend the rest of the project funds on further materials for these boxes. Initially, the boxes included items such as binoculars, magnifying glasses, specimen boxes, and books.

Posters featuring migratory birds at the Dahomey National Wildlife Refuge were distributed to principals of all the schools in Bolivar, Washington and Sunflower counties during the summer of 2004 (See Figure 2). These handsome posters are available for use in classrooms. The posters tell the story of the Mississippi River flyway, and some of the birds that visit DNWR seasonally.

Figure 1:
Interpretive Kiosks at Dahomey National Wildlife Refuge

Two kiosks were constructed by students at Cleveland's Vocational-Technical High School, to display interpretive and informational posters at the Dahomey National Wildlife Refuge. At the time this report was issued, one of these had been installed in front of the Dahomey headquarters. The photos at the right show two angles on this three-panel kiosk. The informational panels had not yet been installed. The second two-panel kiosk was still at the high school awaiting delivery to the refuge. It is slated to be installed adjacent to a small parking lot that visitors to the refuge frequently use.

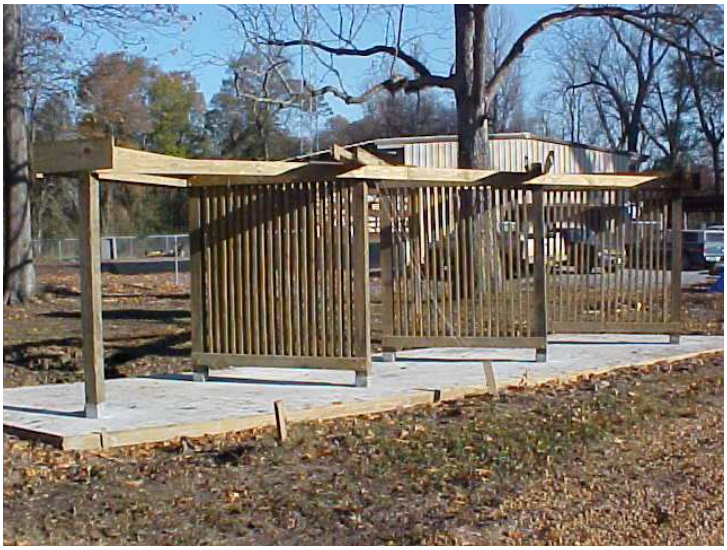


Figure 2:
Poster and Interpretive Boxes for Dahomey National Wildlife Refuge

Text of the Poster:

Migratory Birds at Dahomey Wildlife Refuge

A migratory bird is any bird that breeds and has its babies up North then travels South for warmer weather during the winter months. Dahomey National Wildlife Refuge is located in the Mississippi Flyway, or the migration pathway for birds in central Canada and the United States flying South for the winter. In fact, experts have decided that Dahomey National Wildlife Refuge is one of the top five favorite places for wintering waterfowl (like ducks) in the state of Mississippi.

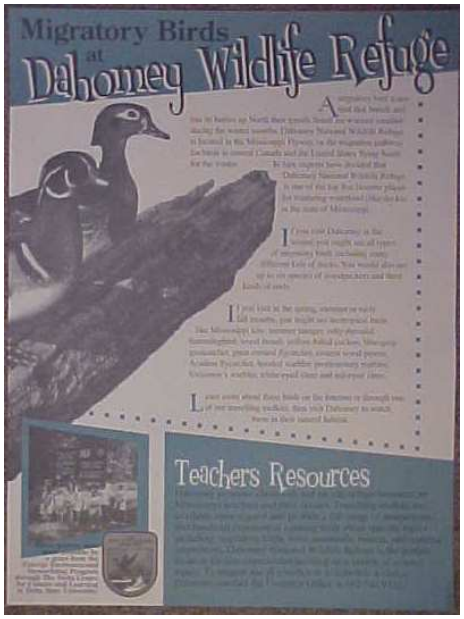
If you visit Dahomey in the winter, you might see all types of migratory birds including may different kinds of ducks. You would also see up to six species of woodpeckers and three kinds of owls.

If you visit in the spring, summer or early fall months, you might see neotropical birds like Mississippi kite, summer tanager, ruby-throated hummingbird, wood thrush, yellow-billed cuckoo, blue-grey gnatcatcher, great-crested flycatcher, eastern wood-pewee, Acadian flycatcher, hooded warbler, prothonotary warbler, Swainson's warbler, white-eyed vireo and red-eyed vireo.

Learn more about those birds on the Internet or through one of our traveling toolkits, then visit Dahomey to watch them in their natural habitat.

Teachers Resources

Dahomey provides classroom and on-site refuge resources to Mississippi teachers and their classes. Travelling toolkits are available upon request and provide a full range of instructions and hands-on experiential learning tools about specific topics including: migratory birds, trees, mammals, insects, and reptiles/amphibians. Dahomey National Wildlife Refuge is the perfect location for free experiential learning on a variety of science topics. To request use of a toolkit or to schedule a visit to Dahomey, contact the Complex Office at 662.742.9331.



This is the poster that was created by the Environmental Stewardship Project and distributed to schools in Washington, Bolivar and Sunflower counties.

These posters were made possible by a grant from the Entergy Environmental Stewardship Program through The Delta Center for Culture and Learning at Delta State University.

Interpretive Boxes:

These interpretive boxes will be kept at Dahomey NWR, and available for classes to borrow or use on visits to the refuge. Shown is the reptile box, with examples of snakes, alligators, and turtles in and around Dahomey. Other boxes feature mammals, trees, wetlands and migratory birds. Boxes will also contain books, magnifying glasses, and other materials.

PART IV:
OVERALL APPRAISAL OF THE ENVIRONMENTAL STEWARDSHIP PROJECT

As part of the survey performed shortly after the Earth Lab visit, fourth grade students and teachers at CPES were asked to evaluate the entire year-long Environmental Stewardship Project. This section presents the results from this portion of the survey.

IV.1 CPES Students

When asked which of the activities they did this year was the most fun, over 80% of the CPES fourth graders chose the visit to the Earth Lab (See Table 5). Three students (7.0% of respondents) chose the butterfly boxes, two students (4.7%) chose the Dahomey Field Day and two others chose the Life Boxes, and only 1 student (2.3%) chose the "9/11 Week of Service." In response to a question asking which of the activities taught them the most, 60% of the students selected the Earth Lab camp, while six students (14.3%) chose the butterfly boxes, five (11.9%) chose the Dahomey Field Day, three (7.1%) chose the life boxes, and three chose the "9/11 Week of Service."

While the Earth Lab Camp was rated highly by students, the "9/11 Week of Service" received low marks. Seventy percent of respondents ranked the "9/11 Week of Service" as the least fun among the activities, while half indicated they learned the least from this activity. The butterfly boxes appeared to be a popular activity as well; in addition to the 7% of respondents that ranked this activity as most fun, nearly two-thirds ranked butterfly boxes in second or third place in terms of enjoyment. About 55% ranked the butterfly boxes in second or third place in terms of educational value.

The Dahomey Field Day was the third most popular activity, just ahead of the life boxes. Over 55% of the students ranked the Dahomey Field Day in second or third place in terms of fun, and a similar

Table 5:
Ranking of Environmental Stewardship Project Activities
by Cypress Park Elementary School Fourth Graders;
Most Fun and Most Educational
(Percent)

Activity	Percent Ranking Activity as Most Enjoyable	Percent Ranking Activity as Most Educational
Earth Lab Camp	81.4	59.5
Butterfly Boxes	7.0	14.3
Dahomey Field Day	4.7	11.9
Life Boxes	4.7	7.1
"9/11 Week of Service"	2.3	7.1
	n = 43, Missing = 4	n = 42, Missing = 5

percentage ranked this activity second or third in educational value. Just over half the respondents ranked the life boxes in second or third place in enjoyment, and slightly less than half ranked this activity in second or third place in terms of how much they learned.

Of course these answers are in part conditioned by the time lapsed from the activities. The survey was undertaken immediately following the Earth Lab visit, so that activity was fresh in the respondents' minds. By contrast, the "9/11 Week of Service" was a distant memory, and few respondents ranked that activity highly either in terms of fun or educational value. Nevertheless, the Earth Lab was an extensive, in-depth program that no doubt was very educational for the students, and exciting and fun as well.

When asked what would be the most enduring lesson that they learned from all of the Environmental Stewardship acitivities, several students mentioned the Earth Lab or specific activities that they did there:

> "I will always remember going to Earth Lab."
>
> "I will remember Earth Lab camp because I liked it so much that I really wanted to stay there. I learned a special thing which is how animals sound. I say that it is special because whenever I hear the sound of an animal voice I would know what the animal is."
>
> "I would remember the Earth Lab camp. We actually went out there and discovered things. They were really nice and I would like to go out there again one day. It was the best."

The butterfly boxes also proved to be memorable:

> "The lesson I will remember forever is the life cycle of a butterfly."
>
> "I will remember about the butterflies for a long, long time. I learned that butterflies drink sugar water. I know a lot about butterflies!"

Tables in Appendix C summarize the students' rankings of Environmental Stewardship project activities, and has all of the comments that the students made regarding the project.

IV.2 CPES Teachers

The opinions of the Cypress Park teachers were similar to those of the students. All three fourth grade teachers ranked the Earth Lab visit as most enjoyable and most educational activity. All three also ranked the "9/11 Week of Service" as least enjoyable and least educational. The teachers ranked the Dahomey Field Day as second in terms of both enjoyment and educational value; two ranked this activity second on both criteria, while the third ranked this activity in third place. The third most valuable activity on both criteria was the life boxes, according to the teachers. Two ranked this third, while one ranked it in second place on both criteria. The teachers differed from the students in ranking the butterfly boxes in fourth place; all three teachers selected this activity fourth in both enjoyment and educational value.

When asked the most important lesson students learned from the environmental stewardship project, the fourth grade teachers responses included:

> "The students have learned that it is everyone's job to help take care of the environment."
>
> "Love nature. Help keep the environment clean. Protect wildlife."

When asked the biggest challenges they faced in the environmental stewardship project, two teachers noted that there was not enough time for the activities carried out at school. One, in particular, cited time limitations during the "9/11 Week of Service:"

> "I wish we would have had more time allotted for the '9/11 Week of Service.'"

This comment suggests that perhaps the low marks for the "9/11 Week of Service" do not represent a lack of appreciation for the activity itself, but for how it was carried out. The Midterm Evaluation report[5] presents a more in-depth evaluation of the "9/11 Week of Service" activity.

One teacher noted that some students required extra discipline during the various special sessions carried out by the Environmental Stewardship Project. This made these activities a greater burden on the teachers.

Overall, however, the teachers seemed to appreciate the environmental stewardship activities, as represented by the high marks they consistently gave on the evaluations. In the final evaluation, one teacher wrote:

> "We appreciate all of the activities that were created for us. Thanks for everything."

Another expressed particular appreciation for the Earth Lab activity:

> "Hope to attend Earth Lab camp in the future!"

Tables in Appendix B summarize the teachers' rankings of Environmental Stewardship project activities, and also list all of the comments that the teachers made regarding all of the activities.

IV.3 Other Perspectives

The evaluator carried out interviews with the principal at Cypress Park Elementary School, with the environmental educator, and with the Refuge Manager at Dahomey National Wildlife Refuge to get their assessments of the Environmental Stewardship Project. The impressions of these individuals as expressed in the interviews are summarized in this section.

[5] See footnote no. 1 for information on accessing the Midterm Evaluation report.

CPES Administration

In an interview with the principal at CPES, she expressed very positive impressions of all of the activities carried out through the Environmental Stewardship Project. When asked which project was the most valuable, she had trouble choosing one:

> "I couldn't pick one project as the most valuable. They all have their own merit. Science is the next thing [for these students] – they will be fifth graders next year. All of those experiences – you can read stuff in a book all day long, or someone can talk to you all day long because they've seen something, or done it, but until you've done it, or touched it, or seen it, you know…"

She noted that she heard very positive comments about all of the activities. The Earth Lab was the most challenging, due to the logistics involved, but it was very worthwhile and very rewarding for the children. Overall, the principal was very grateful for the opportunities provided through the Environmental Stewardship Project.

Dahomey NWR

The Refuge Manager at Dahomey NWR also had generally positive impressions of the project. He worked with the project from the initial stages, when the grant was being prepared, so he had a unique perspective. He knew what the original intentions and plans were, and he could see if they were being carried out as they were intended. He noted that the two people involved in writing the grant left the Delta Center soon after the funding was awarded, and the environmental educator took on most of the responsibilities in running the project. This changed some of the plans and priorities on the project. Nevertheless, he thought the project had accomplished some important things for the national wildlife refuge, and for the kids at Cypress Park.

> "I think the project has been real successful. Things moved a little slower than I would've liked, but I think we're getting them all done. I guess that's to be expected – we're looking for free labor, and volunteers to help us out here."

One aspect that moved more slowly than expected was the construction of the kiosks. When asked which part of the project he though benefited Dahomey NWR the most, he said:

> "I think the kiosks are going to be the most valuable. If they look like the plans that we gave them, they're going to be real nice. Right now we don't have anything like that on the refuge. They'll be here for everyone to enjoy for as long as they last."

He noted, however, that the kiosks were taking more time than they had anticipated:

> "Originally I think we'd planned to have the kiosks done during the week the kids came out, which would've been earlier in the year, during the National Wildlife Refuge week. [Note: This was the week of the environmental education field day at Dahomey, in October 2003]. Once that didn't get done, I think it kind of got put on the back burner. It

> kind of fell through, having that big day; then again, you have to wait on your volunteers building them, out at the Vo-Tech, so they're going to do it when they can."

He noted that losing the SALLY coordinator and the original project manager affected the kiosk project, and not just in the time it has taken to build and install the kiosks. Because of the shift in emphasis in the overall project, the Fish and Wildlife Service has invested over $1,000 in the kiosks, and this does not count a substantial amount of volunteer labor by FWS employees. As the project was initially conceived, all of the money for the kiosks would come from the Entergy grant, and the labor to build and install them would come through service-learning educational projects. As the emphasis shifted away from service-learning, however, the Fish and Wildlife Service had to pick up some of the slack, both financially and in labor by FWS employees.

When asked whether he thought the project had a positive effect on the CPES students, he said:

> "Well I hope it's sparked some interest in the students as far as the natural resources available in the Delta, and just things they can do in their own community, within the city limits, as far as the butterfly house, and doing little habitats like that in their yard."
>
> "The interaction with the schools is going to be a big help down the road, you know, getting more schools out here, maybe that'll turn into getting more employees out here."
>
> "The kids smiled a lot when they were out here, and you could tell they hadn't been far from their school before. Overall, the kids were good. They were a little wild at their school, but when they came out to the refuge they were pretty good, I think."

The Refuge Manager did make one suggestion that would've improved the project in his opinion: hiring a biology student to help out with some of the environmental education activities:

> "I think I would have tried to hire a biology student or someone interested in natural resources to help put the field day together. That would've been helpful, I think. Someone interested in natural resources could've helped get some of these things planned out. A person more into natural resources also could've helped with the interpretive boxes, they could've helped get more stuff for those."

Overall, the Refuge Manager believed that the project benefited the Fish and Wildlife Service:

> "I think the Fish and Wildlife Service definitely got more than we put into it. Overall it was a good project. Once it's completed -- I really want to get those kiosks up. Once those get up, I'm going to feel good about everything."

<u>Delta Center for Culture and Learning</u>

In an interview with the environmental educator, she told about how she came to be involved in this project. She was contacted soon after the project began, and initially she was told it was not a full-time position; however, this quickly changed. The initial project administrators stayed through the "9/11 Week of Service," but left soon thereafter as the SALLY program funding was discontinued. As a result, the

Environmental Stewardship Project fell to the environmental educator, and it became a substantial commitment of time and effort.

She noted that it took awhile for her to establish her plans and agenda for the project. She was hired after the grant was awarded, and shortly thereafter assumed most of the responsibility for the project when the SALLY director and the original project administrator left abruptly. She said there was a learning curve involved in taking over this project, but that she eventually felt more comfortable running everything, in part due to the support she received:

> "The people have been so easy to work with. I was really feeling my way – it's kind of like someone asks you to dance and there's no steps painted out there, and you just take it one step at a time."

One concern she had was whether the project would continue in the future:

> "There's no money, except I can use the SALLY money, to keep up what we've done out there. One of my pet peeves with grants like this is you get something planted and started, and then nobody takes care of it."

She also was concerned about getting the kiosks at Dahomey NWR finished. In particular, she wanted to move the two-panel kiosk from the Vo-Tech school out to Dahomey. Installing the kiosks presented many logistical difficulties over the course of the year, and delayed completion of the project well past its scheduled termination.

Despite the many headaches, the environmental educator expressed a very positive assessment of the project overall.

PART V
CONCLUSION

The Environmental Stewardship Project began in the summer of 2003, after the Delta Center won the Entergy grant. The original project coordinator, the SALLY program coordinator and the Refuge Manager at Dahomey NWR designed a service-learning–based project, coordinated through the Delta Center for Culture and Learning, that played to the Delta Center's strengths. The intent was to include students from Delta State University, Cypress Park Elementary School and the Cleveland Vocational-Technical High School in all aspects of the project. The project included funds to hire an environmental educator.

The project started out with grand plans, but these shifted shortly after the project began. The primary issue was a substantial change in project personnel, for unforeseen reasons. This change in personnel led to a reorientation in focus, and the Environmental Stewardship Project ended up taking a very different approach than initially conceived.

The initial alliance with the SALLY program at CPES was severed when the SALLY program lost its funding and was disbanded, and the SALLY coordinator left. The project manager from the Delta Center also left her position shortly thereafter. Thus, the job of coordinator fell to the environmental educator, and the project focus shifted to a more traditional environmental education approach. The environmental educator took on new responsibilities, including raising funds for the projects she initiated. This emphasis on fundraising has an opportunity cost, as time the environmental educator has spent fundraising has been time she could not dedicate to the tasks of coordinating the environmental education aspects of the project.

The loss of the SALLY coordinator, and her replacement with the environmental educator as the principal project manager, led to a number of problems. Rather than dedicating her time to developing the environmental education aspect of the program, the coordinator has had to deal with a number of logistical issues. Prior to the visit to the environmental education camp, she spent most of her efforts raising funds for this visit, for example. Also, it was left to her to coordinate the placement of the kiosks at Dahomey NWR, a task that required a lot of coordination between the Fish & Wildlife Service, the Vocational-Technical High School, Entergy, and other entities. The shift away from a service-learning focus meant the essentially volunteer labor that would be provided by students had to be undertaken by others. The Fish and Wildlife Service has picked up some of these responsibilities. In addition, most of the emphasis has been placed on the fourth graders at Cypress Park Elementary School. The Vo-Tech students were only involved in building the kiosks, but did not become involved with Dahomey or the project to any substantial extent. The initial intent to involve DSU students was limited to the "9/11 Week of Service," and following this activity, little effort was made to continue involvement by DSU students.

Despite these changes, the general consensus by all involved was that the Environmental Stewardship Project had many positive aspects. There have been clear material benefits, for example, the interpretive

boxes and kiosks at Dahomey, the butterfly garden at CPES, and the posters in many high school classrooms. There also have been educational benefits, such as the brief introduction to community service for DSU freshmen, the many lessons learned by CPES students at the Dahomey Field Day, in the Life Boxes and Butterfly Boxes exercises, and at the Earth Lab environmental education camp, and the hands-on experience the Vo-Tech students gained through building the kiosks. There have been intangible benefits as well, most notably a positive working relationship between DSU professors, Cypress Park teachers, and the Dahomey National Wildlife Refuge has been established, and hopefully will endure with new joint ventures once the Environmental Stewardship Project has ended. And some of these intangible benefits are as yet unknown and perhaps impossible to define or measure. These come in the effects that these projects have had on the lives of all involved, but particularly the young students at Cypress Park. The DSU students visiting their school during the "9/11 Week of Service;" the visit to the Dahomey NWR for the field day, a visit many of them may never had made in their lives outside this project; the opportunity to visit the Earth Lab, for many the farthest they have ever been from home; and the other experiences brought to them through the Environmental Stewardship Project has certainly opened their eyes, and can reap rewards well into the future as these young minds incorporate the lessons they have learned into the big and small decisions they make in their lives.

APPENDIX A:
QUESTIONNAIRES

Cypress Park Elementary School Date_____
Teacher Post-Survey

Environmental Stewardship Project Evaluation

Name_____

This survey asks your opinions of various activities carried out as part of the environmental stewardship project sponsored by the Delta Volunteers and the Delta Center for Culture and Learning.

Please answer all of these questions with the information you have available at the time you take the survey. When you have completed the questionnaire, please place it in the attached envelope and return it to your principal.

Participation in this evaluation is voluntary, and responses to this survey will be kept strictly confidential. If you have any questions or comments, please contact: Dr. Alan Barton, Division of Social Sciences, Kethley Hall 201A, 846-4097, abarton@deltastate.edu

The following questions pertain to the environmental education camp at the Earth Lab in Canton, MS, which Cypress Park fourth graders attended from April 5–7, 2004.

Please read each statement carefully and mark an "X" in the box that best represents your opinion:

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
(1) I believe that the environmental education camp at the Earth Lab was valuable to my students					
(2) I believe my students enjoyed the environmental education camp at the Earth Lab					
(3) I believe my students found the environmental education camp at the Earth Lab educational					
(4) I believe I benefited as well from participating in the environmental education camp at the Earth Lab					

(5) What do you think was the most important thing your students learned from their participation in the environmental education camp at the Earth Lab?

(6) What was the biggest challenge or problem that you encountered during the environmental education camp at the Earth Lab?

(7) Please use the space below for any further comments on the environmental education camp at the Earth Lab:

The following questions pertain to all of the activities carried out during the 2003–2004 school year as part of the environmental stewardship project:

(8) Please rank the projects from the most enjoyable (1) to least enjoyable (5):

____ "9/11 Week of Service"
____ Dahomey Field Day
____ Earth Lab Camp
____ Life Boxes in the Classroom
____ Butterfly Boxes and Garden

(9) Please rank the projects from the most educational (1) to least educational (5):

____ "9/11 Week of Service"
____ Dahomey Field Day
____ Earth Lab Camp
____ Life Boxes in the Classroom
____ Butterfly Boxes and Garden

(10) What do you think is the most important lesson your students learned from participating in the environmental education activities during the 2003–2004 school year?

(11) What was the biggest challenge associated with the environmental education activities during the 2003–2004 school year?

(12) Please use this space for any further comments on the environmental education activities of the 2003–2004 school year:

Thank you for your participation in this survey!

Cypress Park Elementary
4th Grade Student Post-Survey Date_____

Student's Name_____
Student's ID Number_____
Teacher_____

I am completing this survey voluntarily: ____YES ____NO

I am a: ____Boy ____Girl I am _____ years old

The following questions are about the activities and lessons you participated in during your trip to the Earth Lab at Canton, MS. Please mark an "X" next to the answer that is closest to your opinion:

(1) How much fun were the activities and lessons at the Earth Lab?
____ A Lot of Fun ____ Some Fun ____ Not Very Much Fun

(2) How much did you learn from the activities and lessons at the Earth Lab?
____ I Learned A Lot ____ I Learned Some Things ____ I Didn't Learn Very Much

(3) Do you think you will change your actions based on what you learned from the activities and lessons at the Earth Lab?
____ Yes, I'll Make A Lot of Changes ____ Yes, I'll Change Some Things ____ No, I Won't Change Much

(4) Describe the most important thing you learned from your trip to the Earth Lab:

The following questions pertain to all of the environmental education activities throughout the school year. Rank them in order from highest or best (1) to lowest or worst (5).

(5) Which activity was the most fun?

Place a "1" next to the activity that was the most fun, a "2" next to the second most fun, a "3" next to the third most fun, a "4" next to the fourth most fun, and a "5" next to the least fun:

____ "9/11 Week of Service"
____ Butterfly Boxes and Garden
____ Dahomey National Wildlife Refuge Field Day
____ Life Boxes in the Classroom
____ Earth Lab Camp

(6) From which activity did you learn the most?

Place a "1" next to the activity from which you learned the most, a "2" next to the activity from which you learned the second most, a "3" next to the activity from which you learned the third most, a "4" next to the activity from which you learned the fourth most, and a "5" next to the activity from which you learned the least:

____ "9/11 Week of Service"
____ Butterfly Boxes and Garden
____ Dahomey National Wildlife Refuge Field Day
____ Life Boxes in the Classroom
____ Earth Lab Camp

(7) From all of the environmental education activities this school year, what lesson will you remember the longest?

Thank you very much for completing this survey!

Gray Center/Earth Lab
Evaluation Survey

Date_____

Cypress Park Elementary School, Cleveland, MS
Environmental Stewardship Project Evaluation

Name_____
Position_____

This survey is part of an evaluation of the Environmental Stewardship Project, sponsored by the Delta Center for Culture and Learning at Delta State University. The trip to the Earth Lab by Cypress Park Elementary School fourth graders was one activity in this year-long project.

Participation in this evaluation is voluntary, and responses to this survey will be kept strictly confidential. The information will be used primarily for planning purposes, and results will only be released in summary form. You will not be identified, nor will your responses be identifiable, in any report based on this evaluation. If you have any questions or comments, please contact: Dr. Alan Barton, Division of Social Sciences, Kethley Hall 205, Delta State University, Cleveland, MS 38733; (662) 846-4097, abarton@deltastate.edu.

Please answer all of these questions honestly, with the information you have available at the time you take the survey. When you have completed the questionnaire, please place it in the attached postage-paid envelope and return it via U.S. mail.

The following questions pertain to the group of fourth graders from **Cypress Park Elementary School** in Cleveland, MS, that attended the Earth Lab environmental education camp from April 5–7, 2004.

Please read each statement carefully and mark an "X" in the box that best represents your opinion:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(1) I believe that the Earth Lab environmental education camp was valuable to the Cypress Park Elementary School students					
(2) I believe the Cypress Park Elementary School students enjoyed the environmental education camp at the Earth Lab					
(3) I believe Cypress Park Elementary School students found the environmental education camp at the Earth Lab educational					

Please read each statement carefully and mark an "X" in the box that best represents your opinion:

How would you rate the Cypress Park Elementary School group compared to similar groups that have attended the Earth Lab environmental education camp?	Better Than Average	Average	Worse Than Average
(4) In terms of their preparation prior to the camp			
(5) In terms of how much they learned at the camp			
(6) In terms of their behavior at the camp			
(7) In terms of their overall performance			

(8) What do you think was the most important thing the Cypress Park Elementary School students learned from their participation in the environmental education camp at the Earth Lab?

(9) What was the biggest challenge or problem that you encountered in teaching the Cypress Park Elementary School students?

(10) Please use the space below for any further comments on the Cypress Park Elementary School environmental education camp:

Thank you for your participation in this survey!

APPENDIX B:
DATA, CYPRESS PARK ELEMENTARY SCHOOL TEACHERS

Question: "I believe that the environmental education camp at Earth Lab was valuable to my students."

Table B-1: Earth Lab Camp was Valuable to Students

Value	Response	Frequency	Percent
1	Strongly Disagree	0	0.0
2	Disagree	0	0.0
3	Neutral	0	0.0
4	Agree	0	0.0
5	Strongly Agree	3	100.0
Total		3	100.0

Question: "I believe my students enjoyed the environmental education camp at the Earth Lab"

Table B-2: Students Enjoyed Earth Lab Camp

Value	Response	Frequency	Percent
1	Strongly Disagree	0	0.0
2	Disagree	0	0.0
3	Neutral	0	0.0
4	Agree	0	0.0
5	Strongly Agree	3	100.0
Total		3	100.0

Question: "I believe my students found the environmental education camp at the Earth Lab educational."

Table B-3: Students Found Earth Lab Camp Educational

Value	Response	Frequency	Percent
1	Strongly Disagree	0	0.0
2	Disagree	0	0.0
3	Neutral	0	0.0
4	Agree	0	0.0
5	Strongly Agree	3	100.0
Total		3	100.0

Question: "I believe I benefited as well from participating in the environmental education camp at the Earth Lab."

Table B-4: Teacher Found Earth Lab Camp Beneficial

Value	Response	Frequency	Percent
1	Strongly Disagree	0	0.0
2	Disagree	0	0.0
3	Neutral	0	0.0
4	Agree	0	0.0
5	Strongly Agree	3	100.0
Total		3	100.0

Question: The following questions pertain to all of the activities carried out during the 2003–2004 school year as part of the environmental stewardship project. Please rank the projects from most enjoyable (1) to least enjoyable (5).

Table B-5: Most Enjoyable Environmental Stewardship Activity

Value	Response	Frequency	Percent
1	"9/11 Week of Service"	0	0.0
2	Dahomey Field Day	0	0.0
3	Life Boxes in Classroom	0	0.0
4	Butterfly Boxes	0	0.0
5	Earth Lab Camp	3	100.0
Total		3	100.0

Table B-6: Most Enjoyable Activity, Rank of "9-11 Week of Service"

Value	Response	Frequency	Percent
1	First	0	0.0
2	Second	0	0.0
3	Third	0	0.0
4	Fourth	0	0.0
5	Fifth	3	100.0
Total		3	100.0

Table B-7: Most Enjoyable Activity, Rank of Dahomey Field Day

Value	Response	Frequency	Percent
1	First	0	0.0
2	Second	2	66.7
3	Third	1	33.3
4	Fourth	0	0.0
5	Fifth	0	0.0
Total		3	100.0

Table B-8: Most Enjoyable Activity, Rank of Life Boxes

Value	Response	Frequency	Percent
1	First	0	0.0
2	Second	1	33.3
3	Third	2	66.7
4	Fourth	0	0.0
5	Fifth	0	0.0
Total		3	100.0

Table B-9: Most Enjoyable Activity, Rank of Butterfly Boxes

Value	Response	Frequency	Percent
1	First	0	0.0
2	Second	0	0.0
3	Third	0	0.0
4	Fourth	3	100.0
5	Fifth	0	0.0
Total		3	100.0

Table B-10: Most Enjoyable Activity, Rank of Earth Lab Camp

Value	Response	Frequency	Percent
1	First	3	100.0
2	Second	0	0.0
3	Third	0	0.0
4	Fourth	0	0.0
5	Fifth	0	0.0
Total		3	100.0

Question: The following questions pertain to all of the activities carried out during the 2003–2004 school year as part of the environmental stewardship project. Please rank the projects from most educational (1) to least educational (5).

Table B-11: Most Educational Environmental Stewardship Activity

Value	Response	Frequency	Percent
1	"9/11 Week of Service"	0	0.0
2	Dahomey Field Day	0	0.0
3	Life Boxes in Classroom	0	0.0
4	Butterfly Boxes	0	0.0
5	Earth Lab Camp	3	100.0
Total		3	100.0

Table B-12: Most Educational Activity, Rank of "9-11 Week of Service"

Value	Response	Frequency	Percent
1	First	0	0.0
2	Second	0	0.0
3	Third	0	0.0
4	Fourth	0	0.0
5	Fifth	3	100.0
Total		3	100.0

Table B-13: Most Educational Activity, Rank of Dahomey Field Day

Value	Response	Frequency	Percent
1	First	0	0.0
2	Second	2	66.7
3	Third	1	33.3
4	Fourth	0	0.0
5	Fifth	0	0.0
Total		3	100.0

Table B-14: Most Educational Activity, Rank of Life Boxes

Value	Response	Frequency	Percent
1	First	0	0.0
2	Second	1	33.3
3	Third	2	66.7
4	Fourth	0	0.0
5	Fifth	0	0.0
Total		3	100.0

Table B-15: Most Educational Activity, Rank of Butterfly Boxes

Value	Response	Frequency	Percent
1	First	0	0.0
2	Second	0	0.0
3	Third	0	0.0
4	Fourth	3	100.0
5	Fifth	0	0.0
Total		3	100.0

Table B-16: Most Educational Activity, Rank of Earth Lab Camp

Value	Response	Frequency	Percent
1	First	3	100.0
2	Second	0	0.0
3	Third	0	0.0
4	Fourth	0	0.0
5	Fifth	0	0.0
Total		3	100.0

Question: What do you think was the most important thing your students learned from their participation in the environmental education camp at the Earth Lab?

Table B-17: Most Important Lesson from Earth Lab

I think that my students learned to appreciate nature more by using their senses. We got away from TVs, radios, and phones and enjoyed nature.
I feel that my students were engaged in the learning process with "hands-on" activities that dealt with nature and science that truly benefited them for a lifetime.
The students learned not to waste food. The students learned that the environment is more than just a place for humans, but it is also a place for animals.

Question: What was the biggest challenge or problem that you encountered during the environmental education camp at the Earth Lab?

Table B-18: Biggest Challenge or Problem at Earth Lab

Some of the students were so excited that they didn't want to listen in class. They just wanted to run and play outside.
The biggest challenge I felt was handling the discipline problems with certain student that wouldn't pay attention while an instructor was talking and demonstrating. I was constantly having to correct students about their behavior.
My biggest problem at Earth Lab was getting the boys in my cabin to settle down at night and sleep! They were so excited and wired!

Question: Please use the space below for any further comments on the environmental education camp at the Earth Lab.

Table B-19: Additional Comments on the Earth Lab

Just awesome!! All of the instructors did an excellent job with our students.
It was fantastic!

Question: What do you think is the most important lesson your students learned from participating in the environmental education activities during the 2003-2004 school year?

Table B-20: Most Important Lesson from 2003-04 School Year Environmental Education Activities

My students enjoyed watching the life cycle of the emerging butterflies! It was awesome! ☺
The students have learned that it is everyone's job to help take care of the environment.
Love nature. Help keep the environment clean. Protect wildlife.

Question: What was the biggest challenge associated with the environmental education activities during the 2003-2004 school year?

Table B-21: Biggest Challenge from 2003-04 School Year Environmental Education Activities

I wish we would have had more time allotted for the "9/11 Week of Service."
Some of the students required extra discipline during the sessions which made it difficult at times.
There was not enough time given for more activities done at school.

Question: Please use this space for any further comments on the environmental education activities of the 2003-2004 school year?.

Table B-22: Additional Comments on the 2003-04 School Year Environmental Education Activities

We appreciate all of the activities that were created for us. Thanks for everything.
Hope to attend Earth Lab camp in the future!

APPENDIX C:
DATA, CYPRESS PARK ELEMENTARY SCHOOL STUDENTS

Question: "How much fun were the activities and lessons at the Earth Lab?"

Table C-1: How Fun Were Activities at the Earth Lab Camp

Value	Response	Frequency	Percent
1	Not Very Much Fun	0	0.0
2	Some Fun	4	9.1
3	A Lot of Fun	40	90.9
Total		44	100.0

Missing = 3

Question: "How much did you learn from the activities and lessons at the Earth Lab?"

Table C-2: Amount Learned at the Earth Lab

Value	Response	Frequency	Percent
1	I Didn't Learn Very Much	0	0.0
2	I Learned Some Things	10	22.7
3	I Learned A Lot	34	77.3
Total		44	100.0

Missing = 3

Question: "Do you think you will change your actions based on what you learned from the activities and lessons at the Earth Lab?"

Table C-3: Behavior Change Due to Activities at the Earth Lab Camp

Value	Response	Frequency	Percent
1	No, I Won't Change Much	1	2.3
2	Yes, I'll Change Some Things	8	18.2
3	Yes, I'll Make A Lot of Changes	35	79.5
Total		44	100.0

Missing = 3

Question: The following questions pertain to all of the environmental education activities throughout the school year. Rank them in order from highest or best (1) to lowest or worst (5). Which activity was the most fun?

Table C-4: Most Enjoyable Environmental Stewardship Activity

Value	Response	Frequency	Percent
1	"9/11 Week of Service"	1	2.3
2	Dahomey Field Day	2	4.7
3	Life Boxes in Classroom	2	4.7
4	Butterfly Boxes	3	7.0
5	Earth Lab Camp	35	81.4
Total		43	100.0

Missing = 4

Table C-5: Most Enjoyable Activity, Rank of "9-11 Week of Service"

Value	Response	Frequency	Percent
1	First	1	2.3
2	Second	2	4.7
3	Third	6	14.0
4	Fourth	4	9.3
5	Fifth	30	69.8
Total		43	100.0

Missing = 4

Table C-6: Most Enjoyable Activity, Rank of Dahomey Field Day

Value	Response	Frequency	Percent
1	First	2	4.7
2	Second	15	34.9
3	Third	9	20.9
4	Fourth	15	34.9
5	Fifth	2	4.7
Total		43	100.0

Missing = 4

Table C-7: Most Enjoyable Activity, Rank of Life Boxes

Value	Response	Frequency	Percent
1	First	2	4.7
2	Second	10	23.3
3	Third	13	30.2
4	Fourth	14	32.6
5	Fifth	4	9.3
Total		43	100.0

Missing = 4

Table C-8: Most Enjoyable Activity, Rank of Butterfly Boxes

Value	Response	Frequency	Percent
1	First	3	7.0
2	Second	14	32.6
3	Third	14	32.6
4	Fourth	7	16.3
5	Fifth	5	11.6
Total		43	100.0

Missing = 4

Table C-9: Most Enjoyable Activity, Rank of Earth Lab Camp

Value	Response	Frequency	Percent
1	First	35	81.4
2	Second	2	4.7
3	Third	1	2.3
4	Fourth	3	7.0
5	Fifth	2	4.7
Total		43	100.0

Missing = 4

Question: The following questions pertain to all of the environmental education activities throughout the school year. Rank them in order from highest or best (1) to lowest or worst (5). From which activity did you learn the most?

Table C-10: Most Educational Environmental Stewardship Activity

Value	Response	Frequency	Percent
1	"9/11 Week of Service"	3	7.1
2	Dahomey Field Day	5	11.9
3	Life Boxes in Classroom	3	7.1
4	Butterfly Boxes	6	14.3
5	Earth Lab Camp	25	59.5
Total		42	100.0

Missing = 5

Table C-11: Most Educational Activity, Rank of "9-11 Week of Service"

Value	Response	Frequency	Percent
1	First	3	7.1
2	Second	4	9.5
3	Third	7	16.7
4	Fourth	7	16.7
5	Fifth	21	50.0
Total		42	100.0

Missing = 5

Table C-12: Most Educational Activity, Rank of Dahomey Field Day

Value	Response	Frequency	Percent
1	First	5	11.9
2	Second	13	31.0
3	Third	11	26.2
4	Fourth	9	21.4
5	Fifth	4	9.5
Total		42	100.0

Missing = 5

Table C-13: Most Educational Activity, Rank of Life Boxes

Value	Response	Frequency	Percent
1	First	3	7.1
2	Second	9	21.4
3	Third	10	23.8
4	Fourth	11	26.2
5	Fifth	9	21.4
Total		42	100.0

Missing = 5

Table C-14: Most Educational Activity, Rank of Butterfly Boxes

Value	Response	Frequency	Percent
1	First	6	14.3
2	Second	11	26.2
3	Third	12	28.6
4	Fourth	10	23.8
5	Fifth	3	7.1
Total		42	100.0

Missing = 5

Table C-15: Most Educational Activity, Rank of Earth Lab Camp

Value	Response	Frequency	Percent
1	First	25	59.5
2	Second	5	11.9
3	Third	2	4.8
4	Fourth	5	11.9
5	Fifth	5	11.9
Total		42	100.0

Missing = 5

Question: Describe the most important thing you learned from your trip to the Earth Lab

Table C-16: Most Important Lesson at Earth Lab

The I learned from Earth Lab is to touch the earth softly.
The most important thing learn I was about energy.
The most important thing I learn at Earth Lab was birds. I learn that there are different shape of nest and the sizes of the eggs.
Most important thing from Earth Lab was water in life.
The most important thing I learned was about water and life.
The most important thing I learned is that I didn't know 8 legged creatures are not insects.
The most important thing I like from Earth Lab was calling the owls at night and then we heard a various bird name the Whiporwhirl.
The most important thing was to Earth Lab was alternative energy, it was fun.
The most important thing I learned from Earth Lab was not to kill insects.
The most important thing I learned from Earth Lab was when I learned was about birds. I know that birds are so smart.
The most important thing I learned from Earth Lab is that trees are the most important thing on Earth.
The most important thing I learned was water in life.
The most important thing I learn how some birds look like.
The most important thing I learned is how the birds do lots of stuff I did now know and now I do.
The most important thing I learned from Earth Lab is about nature.
The most important thing I learned at Earth Lab is not to litter so animals won't die.
The most important thing I learned from my trip to Earth Lab is how the little animals crawl on the water.
The most important thing I learn from my trip from Earth Lab is that bird makes nest and eat worms.
The most important thing I learned from my trip to Earth Lab you can bake cookies in the sun.
The most important thing I learn from my trip to Earth Lab was about different kinds of birds.
The most important thing I learn from Earth Lab is that the stuff in the dryer is something that the bird can make a nest with it.
The most important thing I learned was how to fish with a net and I learned some of the birds name.
The most important I learned from my trip to Earth Lab is how birds fly and hunt.
The most important thing I learned from my trip to Earth Lab is that some snakes are not poison.
The most important thing I learned from my trip to Earth Lab is not to waste food and do not kill the insects or hurt the animals.
The most important thing I learned from my trip is when you dry your clothes, check all of your pockets and get the lint out of your pockets and take the lint to your backyard and the birds will come and get the lint.
The most important thing I learned from my trip to Earth Lab is you should never talk when teacher is talking because you can miss out on something.
The most important thing I learned from my trip is to not litter, but you can litter the stuff in the dryer, but that is good litter. Birds make their nest with it.
I learned about invertebrates and vertebrates. I also learned about insects and animals.
I learn about bees making silk, and I also learn about good insects eat bad insects. I leaned the part of insects, too.
I liked learning about how to tell directions in the woods. I liked finding out what different animals like to eat.
I learned about birds, water and life. I learned about vertebrates and invertebrates. That's what I learned.
With Joe I learned about all kinds of birds. I learned animals and I learned a lot about butterfly boxes, too.
I learned about animals.
I learned about invertebrates, burn with a magnifying glass, touch the earth softly, and we can't drink a lot of salty water. Thank you Earth Lab for all you have taught me. Thank you Joe McGee for letting us come!
I learned about animals and bees making silk.

I learned about insects and birds. I learned the difference between invertebrates and vertebrates.
I know about invertebrates and invertebrates.
I like when Mr. Joe took us to listen for the owls. Last night I heard an owl.
The most important thing I learned was with Ms. Ruth, alternative energy. We did a project with her and baked cookies in the sun.
I learned about animals and insects. I learned how to feed them. I learned what kind of animals live around here. I learned a lot!
I learned that when Mr. Joe talked about owls, they make noise.
I learned about animals, bugs and the water cycle.

Question: From all the environmental education activities this school year, what lesson will you remember the longest?

Table C-17: Most Enduring Lesson from All Environmental Education Activities

I will remember Earth Lab.
I will remember always when I won the most stuff at Earth Lab in that women class when we made recycle.
I always remember when we went to water and life and I went in the water and caught a fish and a clam with a net.
I will remember the campfire.
I will always remember going to Earth Lab.
I will say I've found some deer tracks when we went on the hike.
I will remember to tell them that the best is 9/11 Week of Service.
The most thing I will remember is the Earth Lab camp.
I will remember the longest is the first time I heard the wippourwill.
Never smoke or litter.
Water in life.
I will remember the trip we had to Earth Lab. I will remember it because we learn a lot. We also had fun at Earth Lab. We enjoy go there, we also want to go again in the summer.
I will remember not to waste so much of food if you not going to eat the it.
I will remember the most is Earth Lab because it was exciting from day 1.
I will remember about wildlife.
The lesson I will remember forever is the life cycle of the butterfly.
The lesson that I will remember forever is the life cycle of the butterfly.
I will remember all about butterfly.
The lesson I will remember forever is the life cycle of a butterfly.
The lesson I would remember forever is the life cycle of a butterfly.
The activities that I would remember forever is the lifecycle of the butterfly.
Lifecycle I learned is about butterfly.
The lesson I will remember forever is the life cycle of a butterfly.
The lesson that I will remember is lifecycle of the butterflies.
The lesson I'll remember the longest is the life cycle of a butterfly.
The I will remember forever is the lifecycle of a butterfly.
The lesson I will remember forever is that you should never kill every little bug you see.
I will remember the life cycle of a butterfly.
I will remember Earth Lab camp because I liked it so much that I really wanted to stay there. I learned a special thing which is how animals sound. I say that it is special because whenever I hear the sound of an animal voice I would know what the animal is.
I liked butterfly boxes, all week of service, Dahomey National Wildlife Refuge field day, life boxes in the classroom, but I loved the Earth Lab the best!
I will always remember the life cycle of the butterflies and how we watched them grow.
Butterfly boxes and garden.
I will remember about butterfly boxes and garden and Earth Lab camp.

Earth Lab camp.
My very favorite one I Earth Lab because I will never forget the fun we had especially learning and in the cabins. There were no holes in the roof or anything. I would like to say thank you Earth Lab.
I learned about the butterflies and the animals at Dahomey and Earth Lab.
I will remember the butterfly boxes and garden. It was a very fun experience for me. I will never forget it.
The lesson Mr. Joe taught me.
I loved the 9/11 Week of Service. It was fun. The people or students from DSU. I love this field trip. I'll never forget it.
I would remember the Earth Lab camp. We actually went out there and discovered things. They were really nice and I would like to go out there again one day. It was the best.
I will remember about the butterflies for a long, long time. I learned that butterflies drink sugar water. I know a lot about butterflies!
My favorite thing is Earth Lab camp.
I loved going to Earth Lab camp. I wish I could go next year.

APPENDIX D:
DATA, EARTH LAB INSTRUCTORS

Question: "I believe that the Earth Lab environmental education camp was valuable to the Cypress Park Elementary School students."

Table D-1: Earth Lab Camp was Valuable to Students

Value	Response	Frequency	Percent
1	Strongly Disagree	0	0.0
2	Disagree	0	0.0
3	Neutral	0	0.0
4	Agree	0	0.0
5	Strongly Agree	5	100.0
Total		5	100.0

Mean = 5.00
Std. Dev. = 0.00

Question: "I believe the Cypress Park Elementary students enjoyed the environmental education camp at the Earth Lab"

Table D-2: Students Enjoyed Earth Lab Camp

Value	Response	Frequency	Percent
1	Strongly Disagree	0	0.0
2	Disagree	0	0.0
3	Neutral	0	0.0
4	Agree	1	20.0
5	Strongly Agree	4	80.0
Total		5	100.0

Mean = 4.80
Std. Dev. = 0.447

Question: "I believe Cypress Park Elementary School students found the environmental education camp at the Earth Lab educational."

Table D-3: Students Found Earth Lab Camp Educational

Value	Response	Frequency	Percent
1	Strongly Disagree	0	0.0
2	Disagree	0	0.0
3	Neutral	0	0.0
4	Agree	2	40.0
5	Strongly Agree	3	60.0
Total		5	100.0

Mean = 4.60
Std. Dev. = 0.548

Question: "How would you rate the Cypress Park Elementary School group compared to similar groups that have attended the Earth Lab environmental education camp in terms of their preparation prior to camp?"

Table D-4: Students' Preparation Prior to Camp

Value	Response	Frequency	Percent
1	Worse Than Average	1	20.0
2	Average	2	40.0
3	Better Than Average	2	40.0
Total		5	100.0

Mean = 2.20
Std. Dev. = 0.837

Question: "How would you rate the Cypress Park Elementary School group compared to similar groups that have attended the Earth Lab environmental education camp in terms of how much they learned at camp?:"

Table D-5: Amount Students Learned at Camp

Value	Response	Frequency	Percent
1	Worse Than Average	0	0.0
2	Average	4	80.0
3	Better Than Average	1	20.0
Total		5	100.0

Mean = 2.20
Std. Dev. = 0.447

Question: "How would you rate the Cypress Park Elementary School group compared to similar groups that have attended the Earth Lab environmental education camp in terms of their behavior?"

Table D-6: Students' Behavior

Value	Response	Frequency	Percent
1	Worse Than Average	1	20.0
2	Average	4	80.0
3	Better Than Average	0	0.0
Total		5	100.0

Mean = 1.80
Std. Dev. = 0.447

Question: "How would you rate the Cypress Park Elementary School group compared to similar groups that have attended the Earth Lab environmental education camp in terms of their overall performance?"

Table D-7: Students' Overall Performance

Value	Response	Frequency	Percent
1	Worse Than Average	1	20.0
2	Average	3	60.0
3	Better Than Average	1	20.0
Total		5	100.0

Mean = 2.0
Std. Dev. = 0.707

Question: What do you think was the most important thing the Cypress Park Elementary School students learned from their participation in the environmental education camp at the Earth Lab?

Table D-1: Most Important Lesson

We care about them, and we want them to learn about the Earth.
In the unnature class, they learned that following teachers instruction is important. They also learned that every individual's actions is important. In small groups they worked on their observation skills, and as individuals they were rewarded for outstanding observational skills.
According to their teacher, she thought that the Lake Hikes and Animal Classes helped make the students more aware of the different species of plant and animal life on the earth and how we humans can affect those plants and animals – for good or bad.
The outdoor environment is not automatically lethal. Snakes don't lurk behind corners waiting to chase you. Insects don't go out looking for someone to sting. Nature can be enjoyed and learned from.
I believe that by participating in a field trip to the Earth Lab, the Cypress Park students "learned" or became aware (probably for the first time in most cases) that the environment exists as an issue or subject for study and concern. It seemed to me that most of the Cypress Park students had had little or no experience interacting with the natural world.

Question: What was the biggest challenge or problem that you encountered in teaching the Cypress Park Elementary School students?

Table D-2: Biggest Challenge or Problem

Harnessing students joy and delight in being (1) away from school and home (many for the first time) and (2) being outside in a beautiful natural setting. Directing these students into a meaningful learning experience took patience and forgiveness by the teacher.
The students were not as academically or socially mature as the average school group. Focusing and staying on task were very difficult for many, even when the task contained physical elements. Listening skills were minimal.
"Classroom" behavior, lack of individual discipline.
There were some behavior problems – but none were severe.
Bridging the cultural chasm between that of the students (underprivileged, deprived) and that of middle class individuals who have had more opportunities in life. Too, most of the students did not seem to have had much experience with rural life (growing up on a farm, say, or visiting grandparents or other relatives who live in the country, have a garden or pond or nearby woodlot). Such exposure often counts a great deal in environmental education readiness.

Question: Please use the space below for any further comments on the Cypress Park Elementary School environmental education camp.

Table D-3: Other Comments

It was wonderful to translate the students' excitement over seeing caterpillars everywhere. They have learned about them at school and each group sang their caterpillar song for me. This helped in establishing a rapport between us and also built their interest in what I told them.
I thought it was a wonderful idea to encourage the students to take part in helping raise the money for this trip to Earth Lab. Several community families, churches, organizations, etc. had a part in getting the students here. This gets the community involved with the school.
When they first arrived, the students seemed "hesitant" or reluctant. By this I mean they seemed unsure or unclear about the goal of purpose of their trip to Earth Lab. By the end of their visit they seemed quite receptive to environmental ideas and thinking – or so it seemed to me.
I am glad Cypress Park was able to come to the Earth Lab. In our brief time with them I hope we were able to leave a positive impression of nature, and contribute to their academic and social growth.

APPENDIX E:
LETTERS FROM STUDENTS ABOUT THE EARTH LAB FIELD TRIP

The following are excerpts from letters sent to the environmental educator from Cypress Park Elementary School fourth graders after the Earth Lab Field Trip.

"I had a good time at Earth Lab. I learned a lot of things. I learned about birds, water life, and some more exciting things. … My favorite thing was when Ruth took us in the Solar House and showed us how to Jupiter, Venus, and the Big Dipper. I loved when we found all kinds of fish. I just want to say thank you for everything, also I want to thank Earth Lab for everything."

"We had a great time at the Earth Lab. We should thank you for the trip. The trip was very nice of you all taking us. The marshmallows were excellent and I had 2. I hope we can go again."

"I enjoyed myself at Earth Lab. I liked when we played games with Ms. Ruth. I also liked when we made a little stick catch on fire with the sun. I was so excited when we saw the foxes. I learned about a lot of things. I want to thank all of you for helping me learn how to take care of animals!"

"I loved Earth Lab because I had fun doing the activities. My favorite activity was when we had to walk up to the rabbit and the rabbit had to point a stick to find us. Now the things I learned is you can have a magnifying glass and make a little dot, and it burns up. This is why I love Earth Lab."

"I thank the bus driver for taking us to Earth Lab. I liked when Joe took us to the lake. I liked when Ruth took us on a ride to the solar-powered house. Mrs. Isabel took us to a camp fire. Mr. Roger took us in the woods. I liked when Ruth turned on the music and we were dancing. I liked when Roger was touching stuff."

"We had a good time at Earth Lab. I liked the solar powered thing like the house. We liked the hike. I looked at birds and the fox. I thank you, Joe, Linda, Isabel, Ruth, Roger and Miss Rosie."

"I am so glad you took us on this trip. I had a fantastic time. Earth Lab was very good. Mr. Joe was fun to be with. I learned so much. You sure know how to plan fun and I thank you very much. I would like to go on another tip like that, please, and thank you!"

"I am so happy that you helped us go to the Earth Lab. I had fun. Thank you for helping us go to the Earth Lab. Miss Rosie's food was good to me. The [illegible] house was pretty. Ruth took us. Ruth's house was good. When Roger took us to the forest, that was fun. The campfire Isabel made was good. The story she read was exciting. I had a good time with Joe and Linda that was the best day I had."

"We had a good time at the Earth Lab. The girls had a good time. I will love to go to Earth Lab again. Mrs. Ruth is so fun. She made us some cookies and we had burnt a stick. Mrs. Ruth, I like that game named Put a Deck. That is so funny. That is why I liked going to the Earth Lab."

"I had a good time. I thank you for the Earth Lab trip. I liked learning about the animals with Joe. I liked camp with Isabel. I also liked Roger's game Rabbits and Foxes. I liked Linda's sock game. I loved Ruth's car ride and the cookies, too. I had fun on the trip."

"I had a good trip to Earth Lab. If we were trouble, I'm sorry. I can't control myself from being bad. I liked your truck, Ruth. I liked the Water and Life Center, Joe. Mrs. Ruth, I liked the poop deck game. Lind, remember me, I won the string! We walked through the path. Roger, I think you let us touch the devil's walking stick. Thank you, Earth Lab."

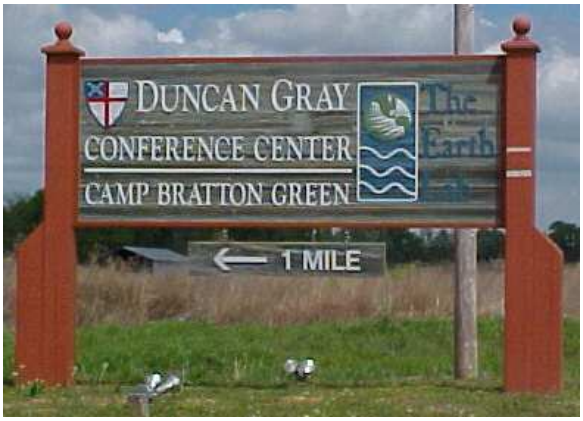
"We had fun, the food was good, then our food. The class was with Mr. Joe, showed us the birds, and Ruth let us try to catch insects. I learned three body of insect like: 1. thorax, 2. heart, 3. abdomen. I liked the campfire, too. So thank you for letting us come to Earth Lab."

"We are so proud to come to Earth lab. I was so happy going hiking and looking at the trees. The best part I liked was getting in the lake with Mr. Joe. I want to thank you, Mrs. Lyon, for letting me get in the lake. I liked when Ms. Isabel let us touch the fox, coyote, raccoons, and bobcat. I liked when Ms. Isabel read the story and the rap. I liked the campfire and the marshmallows. I liked when Ms. Ruth baked us some cookies. I really, really liked when Mr. Joe took us on a walk in the night."

"I had a great time at Earth Lab. It was so fun that I wanted to stay there. I wished we could have had some more days to stay there. I thank you for giving us the opportunity to go to the Earth Lab. The things I liked best were when Ruth took us riding to the Eco House, when we went fishing with Joe, when we called the owls, and most of all when we had a campfire! Thank you for everything you did for us."

"I would like to thank you for letting me come to Earth Lab. It was a wonderful field trip. I loved when I had bird class with Mr. Joe. Mr. Joe did birds. I love birds. I saw a bald eagle where I stay at. I liked when Joe took us to listen for owls. Mr. Roger took us through the woods. Miss Rosie could cook some grits. They were so, so good, but I put salt on them, but they were good. Mrs. Linda was walking to find things. Mrs. Isabel took us through the forest or the woods. It was fun with Mrs. Isabel. I loved this trip to Earth Lab. I'll never forget this trip."

APPENDIX F:
PHOTOS OF THE EARTH LAB FIELD TRIP



Sign directs visitors to the Earth Lab at the Gray Center near Canton, MS.


Inside the cabins at the Earth Lab.


View of the grounds at the Earth Lab.


Cypress Park students eat breakfast at the Earth Lab environmental education camp.

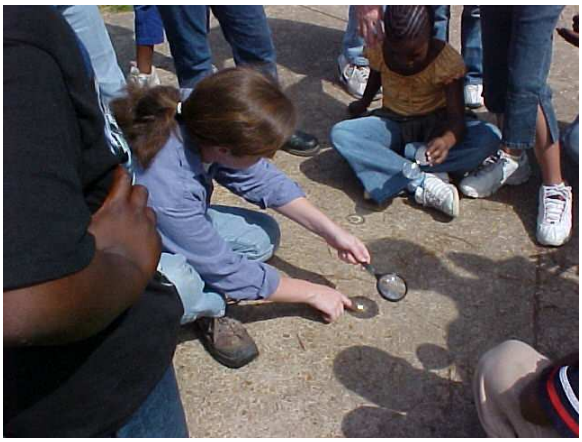

Cabins at the Earth Lab.


Breakfast at the Earth Lab.

Environmental Educator Bootsie Lyon joins the Cypress Park students for breakfast.

Earth Lab director Joe McGee addresses the group after breakfast.

Students compare heat on different surfaces during class on alternative energy sources.



Students learn to concentrate the sun's energy during the alternative energy class.

The instructor demonstrates a solar-powered fan during the alternative energy class.

Students visit the "Eco House" as part of the alternative energy class.

Students examine the “Eco House” during the alternative energy class.

Students listen to Isabel Kelly during the animals class.

Students discuss worksheet assigned during the animals class.

Stuffed animals are used to teach students about Mississippi wildlife.

Naturalist Isabel Kelly teaches the students about animals.

Earth Lab logo

RESOURCES

Cleveland, MS, School District
305 Merritt Drive
Cleveland, MS 38732
(662) 843-3529
http://www2.mde.k12.ms.us/csd/index_htm.html

Cypress Park Elementary School
725 S. Martin Luther King Drive
Cleveland, MS 38732
(662) 846-6152
http://www.greatschools.net/modperl/browse_school/ms/70

Dahomey National Wildlife Refuge
831 Highway 446
Boyle, MS 38730
(662) 742-9331
http://refuges.fws.gov/profiles/index.cfm?id=43635
http://dahomey.fws.gov/index.html

Delta Center for Culture and Learning
Box 3152, Delta State University
Cleveland, MS 38733
(662) 846-4312
http://www.blueshighway.org

Delta State University
1003 W. Sunflower
Cleveland, MS 38733
(662) 846-3000
http://www.deltastate.edu

The Earth Lab at Gray Center
1530 Way Road
Canton, MS 39046
(601) 859-1517
http://www.graycenter.com/earthlab/

U.S. Fish and Wildlife Service
North Mississippi Refuges
2776 Sunset Drive
Grenada, MS 38902
(662) 226-8286

Questions or comments about this evaluation can be directed to the principal investigator:

Dr. Alan Barton
c/o Division of Social Sciences
Kethley Hall 205
Delta State University
Cleveland, MS 38733
(662) 846-4097

This report is available on the World Wide Web at:
<http://ntweb.deltastate.edu/vp_academic/abarton/Research/EnvStewEval/Final Report.pdf