

**Office of University Outreach Scholarship Grant  
Black Belt Environmental Science and Arts Program  
2005 Progress Report**

Program Title: Outdoor Environmental Education for Under-Resourced Black Belt Youth  
Project Director: Dr. Upton Hatch  
Project Coordinator: Kay Stone

***Program Description***

The Auburn University Environmental Institute's (AUEI) Black Belt Environmental Science and Arts Program (BBESAP) reaches out to underserved youth in the Black Belt region of Alabama. BBESAP is an off-campus environmental education project designed to increase the appreciation, knowledge and conservation of natural resources by the region's students and teachers. The program targets students (grades 5-8) in the Black Belt region and provides special outdoor classroom field days, offering educational opportunities and career development exposure in a non-traditional setting. Since its inception, the program has operated in Wilcox County at the Black Freedmen's Living Historical Farm for Children operated by Ms Ellen Byrd.

AUEI (Upton Hatch, Director and Kay Stone, Project Coordinator), Wilcox County School System (Rosa Ashmon, Director of Instruction and Missy Burford, teacher liaison), Black Freeman's Living Historical Farm for Children, Inc. (Ellen Byrd, Founder), AU Libraries (Linda Thornton, Librarian) and AU Center for the Arts and Humanities (AUCAH) (Jay Lamar, Director) have been collaborating for five years on outdoor environmental science and art education experience for Wilcox County youth at the Black Freeman's Living Historical Farm for Children in Furman, Alabama.

The program format is designed to stimulate academic achievement in science and the arts. The program is designed to complement and enhance the classroom curriculum in science by conducting hands-on environmental science modules. The environmental education efforts are further enhanced through an art module that is an extension of the *River of Words (ROW)* Environmental Art and Poetry program, affiliated with the Library of Congress and administered in Alabama by the Auburn University Center for the Arts and Humanities (AUCAH), AUEI and Auburn University Libraries. *ROW* is a national environmental art and poetry contest created to promote watershed/natural resources awareness, literacy and the arts among our nation's youth. Students from previous field days have won recognition at the state level of the ROW competition.

The 2004 Outreach Scholarship Grant was awarded in January, 2004. The Outreach Scholarship funding along with support from other sponsors including Weyerhaeuser, Alabama Power Company, Legacy, and the National Endowments for the Arts/U.S. Forest Service allowed the continuation of field days through spring and fall of 2005. The funds and in-kind services covered supplies, module leader stipends, transportation, equipment, and supplemental classroom manuals for teachers.

### ***Program Development and 2005 Activities***

Each semester in 2005, AU staff met with Wilcox County School System teachers and staff to review the previous semester field day objectives, discuss how to integrate the field days with the classroom curriculum and plan the upcoming field days. The modules are designed to stimulate and motivate students to improve their classroom performance. Teachers have noted that information learned during the field days has appeared on standardized tests.

During the 2005 spring and fall semesters, twelve field days were conducted and over 465 children attended from six different Wilcox County Schools. Children were divided into small groups of 12 or less to allow for individual attention during module activities. Attachments 1 and 2 contain module outlines for the 2005 field days. Attachment 3 contains photographs of the spring field days.

### ***Program Partners***

Partnerships in the BBESAP fall into one of three categories: program development group, financial partners and instructional partners. The development group includes AUEI, Wilcox County Schools, Black Freedmen's Living Historical Farm for Children, Inc., AU Librarians and AUCAH.

In addition to the generous 2004 Outreach Scholarship Grant, several organizations have partnered with funding for the program during the last four years. Two grants have been funded from the National Endowment of the Arts/US Forest Service program, one for \$15,000 and one for \$10,000. Legacy, Inc. awarded a grant of \$7,900. Alabama Power Company, in addition to volunteering time and staff to lead water quality-related modules, has donated \$1,000 to the project. Weyerhaeuser has provided assistance in the nature photography module by helping the school develop and print photographs taken by students during the field days.

The BBESAP utilizes expertise based in many fields of study and off-campus partners. Recent module leaders for the field days included representatives from Alabama Power, Alabama Department of Conservation and Natural Resources, U. S. Geological Survey, Alabama Pulp and Paper Council, and Auburn University Colleges of Architecture, Forestry, Liberal Arts, Veterinary Medicine and Agriculture. The Environmental Institute manages the program, but is fortunate to draw upon instructors from diverse backgrounds. An added benefit of such a diverse instructor pool is the students are able to learn about the variety of careers associated with environmental science and art education.

### ***Evaluations/Testimonials***

AUEI staff asks teachers and students to complete brief evaluation forms at the end of each field day. The feedback from the evaluations is used to assess the appropriateness of each module to the age group and classroom curriculum. The evaluations also provide useful suggestions on ways to improve the outdoor learning experience. Attachment 4 is a summary of the 2005 spring and fall field day evaluations.

### ***The Future***

The generosity of funds, time and expertise of all the BBESAP partners has allowed the program to successfully enhance the environmental education for the children of Wilcox County. The program is scheduled to expand in spring 2006 to Macon County with a pilot

field day to be held at the E.V. Smith Agriculture Experiment Station in Milford, Alabama. Students from the fifth and sixth grades at D. C. Wolfe Elementary School in Shorter, Alabama will attend.

A second field site in Wilcox County is also under consideration for expansion of the project. Auburn University owns the 50-acre parcel of property which contains Indian village remains. Initial documentation of the site was conducted in the 1960's when the U.S. Army Corps of Engineers dammed the Alabama River for the Dannelly Reservoir. The property was donated to Auburn University by the Liddell- Stroud-Hall families and has been used as a resource for archaeology field courses. This archaeological site contains evidence of human occupations from the early Archaic of about 9000 BC until the time of reconstruction in the 1870s-1890s following the American Civil War.

AUEI continues to pursue resources to maintain and expand the program. Currently, four proposals are pending with U.S. Environmental Protection Agency, 2006 Outreach Scholarship Grant, Legacy, Inc. and Alabama Pulp and Paper Council. The funds remaining in the current Outreach Scholarship Grant (approximately \$2,280) will be used to defray expenses for the spring 2006 field days.

**Attachment 1**

**Field Trips to Freedmen's Farm**

**Spring 2005 Farm Modules**

	<b>Assistant</b>	<b>School</b>	<b>Grade</b>	<b>Science I</b>	<b>Science II</b>	<b>Science III</b>	<b>Artist</b>
<b>Cancelled – bus trouble Tuesday, April 19</b>	LAURA	Hobbs	5	Donna Smith - Freedmen History	Casey Knight - Aquatic Invert.	Bob Hastings - AL Natural Heritage	Music/ Story Telling Charles T
<b>Wednesday, April 20</b>	LAURA	Hobbs	6	Ellen Byrd – Freedmen History	Cindy Channel Butcher - Horticulture	Charles Stover and John Morris - AL Power	Frontier Life Huck Carrol
<b>Tuesday, April 26</b>	LAURA	GW Watts	5 and 6	Donna Smith - Freedmen History	Casey Knight - Aquatic Invert.	Al Schotz - AL Natural Heritage	Music/ Story Telling Charles T
<b>Wednesday, April 27</b>	LAURA	ABC	5 and 6	Donna Smith - Freedmen History	Cindy Channel Butcher - Horticulture	Charles Stover - AL Power	Frontier Life Huck Carrol
<b>Tuesday, May 3</b>	NICOLE	FS Ervin	5	Donna Smith - Freedmen History	Bob Hastings - Snakes	Christy Nix and Ashley Vicar - AL Power	Music/ Story Telling Charles T
<b>Wednesday, May 4</b>	NICOLE	FS Ervin	6	Donna Smith - Freedmen History	Cindy Channel Butcher - Horticulture	Christy Nix and Ashley Vicar - AL Power	Music/ Story Telling Charles T
<b>Thursday, May 5</b>	NICOLE	CSAT	8	Donna Smith - Freedmen History	Casey Knight - Aquatic Invert.		
<b>Tuesday, May 10</b>	UPTON	CSAT	7 and 8	Charlene Lebleu - Landscape Architecture		Donna Smith - Freedmen History	Frontier Life Huck Carrol
<b>Wednesday, May 11</b>	JAY	CSAT	7	Donna Smith - Freedmen History	Casey Knight - Aquatic Invert.	Bill Dykes - AL Power	Frontier Life Huck Carrol

## Attachment 2

Environmental field days (Wilcox Co) Fall 2005				
Date	Modules (leader and topic)			
	1 – Science	2-Science	3-Science	4
Tuesday October 18 <sup>th</sup> Hobbs – 6 <sup>th</sup> grade <b>School Cancelled</b>	Trail Walk/ Tree & Plant Identification Laura Robinson	Earth Science/ Water Cycle Kay Stone AUEI	Reptile/ Amphibian Ecology Bob Hastings	Haiku Poetry/ Interpretive Writing Lin Thornton AU Library
Friday October 21 <sup>st</sup> CSAT – 8 <sup>th</sup> grade	Wildlife Biology Bennett Moseley Alabama DCNR	Pond Ecology Will Mooty USGS	Donna Smith Black Heritage/ Farm History	Photography/ Descriptive Writing Meryl Manfre
Thursday October 27 <sup>th</sup> Ervin – 6 <sup>th</sup> grade	Trail Walk/ Tree & Plant Identification Butcher <b>Cancelled Due to Illness</b>	Earth Science/ Horticulture Channell- Butcher AU – Agric.	Reptile/ Amphibian Ecology Bob Hastings	Haiku Poetry/ Interpretive Writing Lin Thornton AU Library
Friday October 28 <sup>th</sup> CSAT – 7 <sup>th</sup> grade	Water Science Charles Stover Alabama Power	Pond Ecology Will Mooty USGS	Raptors Auburn University Raptor Center <b>Cancelled Due to Illness of staff</b>	Photography/ Descriptive Writing Meryl Manfre
Friday, November 4 <sup>th</sup> ABC Elementary - Attended <b>Watts Elem. Cancelled</b> 6 <sup>th</sup> grade	Trail Walk/ Tree & Plant Identification Butcher	Earth Science/ Horticulture Channell- Butcher AU – Agric.	Reptile/ Amphibian Ecology Bob Hastings	Haiku Poetry/ Interpretive Writing Lin Thornton AU Library

**Attachment 3**  
**Photos from 2005 Spring and Fall Field Days**



Students from Camden School for the Arts and Technology (CSAT) showing their teacher, Mrs. Burford, the type of macro-invertebrates seined from the nearby pond as part of the pond ecology module.



Will Mooty, module leader, from the U.S. Geological Survey explains to students from CSAT about the insects and small animals found in the pond. Mr. Mooty also answered questions about his job as a water quality scientist for USGS.



CSAT students using probes and tweezers during pond ecology module.



Bob Hastings, wildlife biologist, discusses the differences between reptiles and amphibians with students from ABC Elementary School.



Students from Ervin Elementary get a “hands on” experience with a family of corn snakes during BBESAP field days.



Module instructor, right, Meryl Manfre, AU art student, discussing framing nature photos using cardstock viewers with students from CSAT.



Cynthia Channell-Butcher, AU College of Agriculture, center rear, reviews types of herbs with students from Ervin Elementary prior to preparing a Mediterranean (Pizza) Herb Garden for the students to plant and keep in their classroom to study.



Charlene LeBleu, AU College of Architecture, Design and Construction, discusses watershed issues with a group of Wilcox County students in May 2005.



Sixth grade students from ABC Elementary learn the methods for writing haiku poetry.



Linda Thornton, AU Librarian, helps an ABC Elementary student learn that observing nature is a great place to get inspiration for poetry and descriptive writing.

**Attachment 4**  
**Project Evaluation – 2005 Spring and Fall Workshops**  
**Field Trips to The Black Freedmen’s Living Historical Farm for Children, Inc.**

Project evaluations are important in determining the effectiveness of the materials presented and learning ways to improve future field trips. For the spring and fall 2005 field trips to Freedmen’s Farm, we developed evaluation forms for the teachers and focus group questions for the students. At the end of each field trip, teachers were given a brief form to complete and students were also asked to complete forms usually in groups around the lunch table.

The evaluations provided useful feedback. We will continue to evaluate the field trips in the future and implement the suggestions.

Twelve field days were completed during the spring and fall 2005. Approximately, 465 children were able to participate. Two other field days were planned and did not occur due to transportation problems and scheduling conflicts at individual schools. Staff will implement a slightly different confirmation process in hopes to prevent scheduling conflicts in the future.

### **Teacher Evaluations**

Teachers escorting students to the field trips were asked to respond to the following questions on the evaluation form:

- How would you evaluate the overall program you participated in today?
- What are some ways we can improve the modules?
- How do you think the field trip will help you with your classroom teaching?
- Do you think the equipment (microscopes, binoculars, etc) helped the students learn about the environment? If so, how?

The teachers responded positively to the evaluation of the overall program. For example:

- *“The program provides a wonderful hands-on learning experience for the students.”*
- *“This was a wonderful environmental experience. The presenters were very enthusiastic and well-prepared.”*
- *“The field day was excellent and informative in many areas of educational contact. I enjoyed the experience and see possibilities for follow-up lessons from the trip.”*
- *“The day was very informative and energetic. I learned a lot and I’m sure my students did also.”*

In addition to the comments noted, teachers provided useful feedback on how to enhance the project. To improve students’ learning experience, teachers suggested:

- Increasing/maintaining the hands-on activities as the children respond very positively to them.
- Including activity sheets which ensure the students are paying attention. (This comment was made during the spring field days and several activity sheets were incorporated into the fall modules including the herb garden, pond ecology, wildlife habitat, and haiku poetry.)
- One teacher noted that module leaders may want to encourage students who tend to be shy to participate more.
- No real recommendations other than perhaps including more variety of plants.
- Would like to see more variety of photo opportunities in photography module, perhaps animals and plant identification.

When asked about how the field days might help with classroom curriculum, the teachers responded:

- The modules reinforce the activity sheets and textbook concepts used in school.
- They also said that it gave them ideas for more hands-on activities in the classroom.
- I can use this field trip to reinforce science skills in the classroom. It will help in the study of plants and how to care for them.
- Since I teach language arts, the poetry section of this field trip was very beneficial. By focusing on haiku, this also incorporated social studies.

The teachers were asked to comment on the use of equipment much of which was purchased with Legacy grant funds. Examples of equipment used include: microscopes, binoculars, clipboards, art supplies, lab probes/tweezers, field guides, plants, gardening tools, laminated posters, and disposable cameras. Responses included:

- The water cycle demonstration utilized equipment that made the module very interesting to the students.
- The field/lab experience is good. The equipment is very useful and some students liked the microscopes.
- The use of equipment offers the students a greater understanding and connection not provided by textbooks and worksheets.
- The equipment such as the microscopes and magnifying glasses allow students to see parts of the environment that are otherwise invisible.
- The equipment gave the students a chance to participate in each activity.
- The equipment helps with visual learning and truly puts learning in the hands of the students.

The feedback from the teacher evaluations will be used to continue to improve the field trips.

### **Student Focus Group Evaluations**

Staff performed student group evaluations during most of the twelve field trips. The students were asked to respond to the following questions:

- Tell us some of the things you learned about your environment today that you didn't know before you came?
- Did learning with an artist help you to appreciate your environment more? How?
- Which ways of teaching did the module leaders use that were the best in teaching you about your environment?
- What will you do different to help take care of and preserve your environment?
- What did you like most about this field trip?
- What would you like us to add to future trips?

The students were always enthusiastic about providing feedback. For each session the groups reported what they learned that day. Examples of things they learned were:

- History of life on the farm
- Soil can be made from dead things (leaves)
- How to plant (corn)
- How fish grow
- How the water cycle and watersheds work
- I did not know that you can tell the health of the pond water by the bugs you find in the pond.
- We learned there aren't any poisonous lizards in Alabama.

- We learned about the sweet gum tree, that snakes have bones and the types of herb spices on a pizza.

The students agreed that the artists helped them appreciate the environment more. For example, they learned about:

- Not littering
- When you respect the environment, you respect yourself
- How to use the five senses in nature
- Express the way you feel through music, poetry and songs
- The artist helped us see things for different points of view. She helped us understand not to mess up the environment.
- The artist helped us understand that things we enjoy come from nature.

The students enjoyed the following teaching methods used by module leaders: learning about pond life, the volunteering for activities with the Alabama Power water demonstrations, trail walks, nature photography, herb gardening and haiku poetry.

Most importantly, we asked the students if they will do anything different to help take care of and preserve the environment as a result of what they learned at the Farm. The students responded with the following:

- Not to put trash in the water
- Don't mess up the soil with pollution
- Make reservoirs to collect water
- Don't plant rows downhill as creates runoff.
- The trail walk guide taught us not to break limbs from trees.
- We learned to care more about the environment by recycling.

What the students liked most about the field trip to Freedmen's Farm were the animals, water demonstrations, being outside, meeting new people, painting and going to the pond. They also enjoyed finding insects/frogs, and music. On future trips, the spring 2005 students wanted to see more animals particularly snakes and reptiles and fall field days for the sixth graders included a module comparing reptiles to amphibians. Trail walks in the woods were also suggested in the spring 2005 field days and were implemented in the fall schedule.