



## Outstanding OEEF Grant Projects

for Pre-Kindergarten Through University Audience



The General Assembly created the Ohio Environmental Education Fund (OEEF) in 1990 to enhance Ohio citizens' awareness and understanding of environmental issues. It is administered by the Ohio Environmental Protection Agency (Ohio EPA) and provides general grants up to \$50,000 and mini-grants up to \$5,000 to support environmental education efforts within the state of Ohio. Half of all civil penalties collected by Ohio EPA for violations of Ohio's air and water pollution control regulations are diverted to fund the OEEF.

The OEEF funds education projects that target three audiences:

- Pre-Kindergarten through University students and teachers;
- the general public; and
- the regulated community.

OEEF supports projects that increase public awareness and knowledge about environmental issues, and provide the skills to make informed decisions and take responsible actions. Environmental Education is based on objective and scientifically sound information, and does not advocate a particular viewpoint or course of action. It teaches individuals to weigh various sides of an issue through critical thinking, and enhances problem-solving and decision-making skills. The successful grant projects highlighted in this booklet exemplify some of the state's best examples of effective environmental education.

## **Outstanding OEEF Grant Projects for Pre-Kindergarten to University Level**

Periodically, the OEEF contracts with the Environmental Education Council of Ohio (EECO) to perform an independent evaluation of the success of completed grant projects that target Pre-Kindergarten to University level learners. The best projects, as determined by a team of formal and non-formal educators and representatives from community-based organizations, receive OEEF Outstanding Project Awards.

The team reviews current scholarship on student learning and publications such as EECO's *Best Practices Guidelines for Environmental Education: Guidelines for Success* online at [www.eeco-online.org/publications/pdfs/beeps.pdf](http://www.eeco-online.org/publications/pdfs/beeps.pdf), and the North American Association for Environmental Education's *Excellence in Environmental Education – Guidelines for Learning (K12)* available online at [www.naaee.org/publications/guidelines-for-excellence](http://www.naaee.org/publications/guidelines-for-excellence).

Because OEEF grant projects are quite diverse, and grant products are often similar in format to portfolios, the team uses a holistic instrument for the grant evaluation process. Team members review projects using paragraph rubrics for three categories: curriculum development, student activity and professional development for K-12 educators. These instruments have been refined several times over the years and a tool for Web site evaluation has also been added. The instruments, and the award winners, are posted at [www.epa.ohio.gov/oeef/oeef\\_featured\\_ee\\_projects.aspx](http://www.epa.ohio.gov/oeef/oeef_featured_ee_projects.aspx).

To inspire educators and prospective grant applicants, OEEF has compiled this booklet to showcase 36 outstanding environmental education projects for the Pre-Kindergarten to University audience.

## 2004 OEEF Outstanding Project Awards

**Pickerington Local Schools/Tussing Elementary, *Changing Places*, \$50,000, #98G-023. Contact: Mary Sheridan, (614) 837-8078 or [marysheridan1@mac.com](mailto:marysheridan1@mac.com).**

Students at Tussing Elementary combined art, science and social studies to understand the historical changes in the land on which their school sits. Students and teachers researched the history of the land and created an outdoor learning area that restored historically indigenous habitats.



**Miami University, Department of Zoology, *Furthering Systemic Change at the Local Level: Advanced Environmental Education for Elementary Teachers*, \$30,508, #99G-001, contact: Don Kaufman, [kaufmadg@muohio.edu](mailto:kaufmadg@muohio.edu).**

Provided 160 elementary teachers with training in the ecology and natural history of southwestern Ohio ecosystems, to help participants implement science education reforms in their classrooms. Emphasized inquiry and hands-on learning combined with field work.

**Ohio State University Extension, Licking County, *Community Garden*, \$31,899, #99G-081, Contact: OEEF at (614) 644-2873.**

Involved 50 youth, ages 14-17, assigned to community service by the Licking County Juvenile Court in a community garden over the course of two growing seasons. Trained students in garden design; traditional, organic and Native American farming methods; composting; erosion control; and ground water protection. Students from local 4-H programs participated as student mentors. Provided garden produce to a local senior center.



**Perry County Health Department, *Picture Perry County*, \$34,320, #00G-031,  
Contact: OEEF at (614) 644-2873.**

Program for all 5th-grade classes in Perry County focused on environmental laws and regulations; the link between environmental hazards and human health risks; and the role of public health officials. Each student received a recyclable camera to research and photograph environmental health hazards in their communities. Photos were entered in an essay/photo contest, with the winning entries displayed at local events. Collaborators on the project include the Perry Hocking Education Service Center; the Coshocton-Fairfield-Licking-Perry Solid Waste Management District; and the Perry County Litter Prevention and Recycling Program.

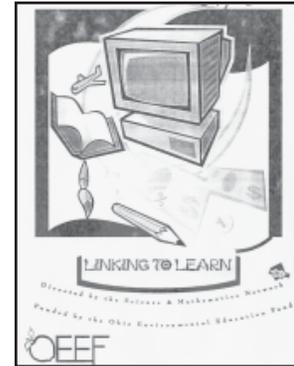
**Ashtabula Area City Schools, *Waterways Adventure*, \$48,828, #00G-046,  
Contact: OEEF at (614) 644-2873.**

Provided professional development for teachers, classroom supplies, and environmental science curriculum related to local wetlands and waterways for 2000 students in grades 4, 5, 6, 8, and 12. Students conducted field monitoring at selected lake, river and pond sites, and shared their results at the Ashtabula River to Lake Symposium, and the Great Lakes Science Symposium in Buffalo. Collaborators include After School Discovery, the Ashtabula County Soil and Water Conservation District, and the Ashtabula River Partnership. Current program information is available online at <http://afterschooldiscovery.com/programs.htm>.



**Science and Mathematics Network, *Linking to Learn*, \$49,508, #00G-047,  
Contact: Pat Barron (614) 265-9800 or [tlc@teachinglearningcollaborative.org](mailto:tlc@teachinglearningcollaborative.org).**

Building on a previous OEEF Outstanding Project, *Habitats for Learning*, provided 13 months of in-person and online professional development for 30 teachers from grades 3-6 selected from all 12 education regions of the state. Pilot program helped teachers enhance outdoor environmental science instruction through inquiry teaching; facilitation; student-led investigations; and by embedding computer technology into the curriculum. Online resources such as Web sites, WebQuests,; and a listserv linked participants to experts, teachers and classrooms statewide. Collaborators include the Ohio Department of Natural Resources; Instructional Technology Services of Central Ohio; and the Environmental Education Council of Ohio.



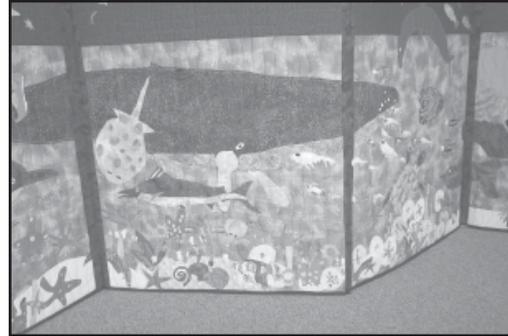
**Otsego Local Schools: Weston Elementary, *Weston's World of Wonder: Outdoor Learning Lab*, \$31,287, #00G-049, Contact: OEEF at (614) 644-2873.**

Provided a land lab/outdoor classroom for use by 300 students and their teachers, local park programs for the general public and college environmental education students doing student teaching. Included in-service professional development for teachers, who developed K-6 lessons in environmental education, building on previous OEEF Outstanding Project *Habitats for Learning*, and activities from *Project WET* and *Project WILD*. Involved elementary students, parents, teachers and staff in site planning, construction, maintenance and evaluation. Included prairie, Black Swamp and hibernation simulations, as well as a small pond and pathways, a butterfly and herb garden, rock learning circle, weather station and a compost bin. Information is online at [www.otsego.k12.oh.us/w-special-programs.htm](http://www.otsego.k12.oh.us/w-special-programs.htm).



**Pickerington Local Schools - Tussing Elementary, *Changing Places: Weaving Sound Connections*, \$50,000, #01G-024, Contact: Mary Sheridan, (614) 837-8078 or [marysheridan1@mac.com](mailto:marysheridan1@mac.com).**

Building on a previously funded OEEF project (#98G-023), provided students with the experiences of monitoring and maintaining indigenous habitats on school grounds, including a half-mile walking path and bluebird trail, a quarter-mile wetland and several gardens and forested areas. Partnered with a humpback whale listening station in Alaska so children could monitor activities of marine animals. Additional funds enabled visits by several guest artists including; authors; a film maker; an illustrator and a marine biologist for teacher in-service workshops and student projects. Documented student experiences through a variety of media including books and film productions for community display.



**Aullwood Audubon Center and Farm, *Birds, Flight and the Wrights*, \$50,000, #01G-056, Contact: Tom Hissong, (937) 890-7360 or [thissong@audubon.org](mailto:thissong@audubon.org).**

Two-year pilot education initiative related nature, science and flight with core curriculum areas for children in grades 4-8. During the first year, 25 4th- and 5th-grade gifted students from Englewood Elementary worked with teachers and Aullwood educators to design a curriculum, field experiences and display relating birds, flight and the Wright Brothers. A professional design firm fabricated an interactive display to be seen/used by 80,000 Aullwood visitors. All 350 Englewood students and 25 teachers participated in four field experiences integrating state science outcomes and natural history. Two full-day workshops helped teachers integrate pre-and post-visit activities. In the second year of the program, an additional 1,000 Dayton-area students in grades 4-8 participated in field trips to Aullwood and distance learning experiences linked to Wright Brothers and flight-related sites in Ohio, North and South Carolina. An additional 25 teachers participated in a four-hour workshop to integrate these activities.



**Miami University, Department of Zoology, *The GREEN Teachers Institute: A Progressive Approach to Learning for Teachers*, \$30,360, #02G-036, Contact: Don Kaufman, [kaufmadg@muohio.edu](mailto:kaufmadg@muohio.edu).**



Provided two 10-day advanced field-oriented workshops on southwest Ohio ecology, natural history and environmental issues for 160 K-8 teachers. Participants developed five inquiry learning episodes for use in their classrooms during the following academic year, with follow-up via Saturday seminars and in-service presentations to reinforce concepts. Differed from the OEEF-funded advanced workshop series in 1999-2001 by adding an online component to provide teachers with additional instruction in the use of inquiry learning, and practice in integrating Web-based technology into their lessons. Previously developed inquiry investigations and activities are posted at [www.environmentaleducationohio.org](http://www.environmentaleducationohio.org) under "Science for Ohio."

**Ohio River Valley Water Sanitation Commission, *ORSANCO Floating Classroom Pilot Program*, \$50,000, #04G-018, Contact: Heather Mayfield, (513) 231-7719 or [hmayfield@orsanco.org](mailto:hmayfield@orsanco.org).**

Aboard an historic paddle-wheeler refitted as a science classroom, provided a four- to six-hour lesson on Ohio River water quality and a chemical spill investigation simulation for 280 10th- and 11th grade students, as well as other youth and community groups. Topics included physical and chemical testing; weather; and biotic sampling of fish and macroinvertebrates. Compared results with online database of volunteer-collected data. Program included in-service for participating teachers, and post-visit community education projects. Collaborators included the Green Acres foundation; Monroe Elementary; Hamilton County Environmental Services; and the Science and Mathematics Network. Information about the river education program is available online at <http://orsanco.org/index.php/riverwatchers>.



**Ohio Oil and Gas Energy Education Program, *How to Design Classroom Research Teams: A Model to Demonstrate Classroom Collaboration Using an Environmental Issue*, \$4,889, #00M-035. Contact: Rhonda Reda, (740) 587-0410 or [rreda@oogeep.org](mailto:rreda@oogeep.org).**

Provided a model, training and supplies for 30 middle school science teachers to set up classroom experiments and student research teams as called for in state science competency guidelines, focusing on an oil spill cleanup and related energy and environmental issues. Model evaluated and refined based on follow up with at least six of the teachers who used it. Science Education Council of Ohio is a collaborator.



**Upper Arlington School District - Wickliffe Elementary, *Wickliffe Informal Alternative Outdoor Learning Environment*, \$4,999, #01M-028, Contact: OEEF at (614) 644-2873.**

Expanded an outdoor education learning environment for 500 students at Wickliffe Elementary and adults from the surrounding community. Added new niches including a bird sanctuary for identification of bird species and habitats; a butterfly garden where students will research, identify and plant vegetation to attract butterflies; and an Ohio forest study area featuring native perennials for data collection on plants, insects and wildlife. Provided enhancements for an existing organic vegetable garden for studying composting, mulching, and the use of natural herbicides. Produce donated to a local food bank and homeless shelter. Conceptual designs developed with assistance from The Ohio State University.



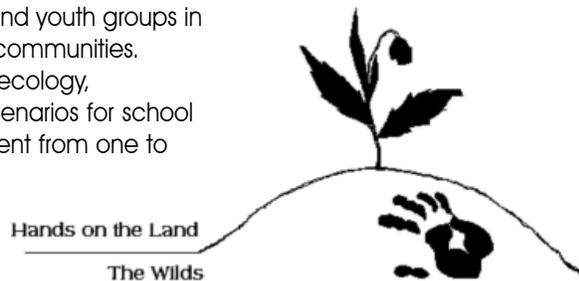
## 2006 OEEF Outstanding Project Awards

**Cincinnati Waldorf School, *Explore and Restore Environmental Literacy Project*, \$34,884.00, #02G007, Contact: Christine Masur, (513) 541-0220.**

An 18-month landbased interdisciplinary program for 75 students in grades 1-6. Components included faculty development; regular site visits to a 17-acre outdoor classroom to study native plants and animals; construction of a nature trail and habitat restoration; gardening and farming activities; and five community seminars on environmental issues.

**International Center for the Preservation of Wild Animals, Inc. (The Wilds), *Hands on the Land: Restoration Ecology*, \$49,755.00, #02G-043, Contact: [dbrooks@thewilds.org](mailto:dbrooks@thewilds.org).**

Involved 390 middle and high school students and youth groups in restoration ecology at the Wilds and in their home communities. Developed a standards-based curriculum in basic ecology, environmental impacts, and restoration practice scenarios for school teachers. Students and youth group participants spent from one to three days at the Wilds learning restoration techniques and doing restoration field work. Upon returning home, students/youth examined ecosystems in their communities and proposed local restoration projects. Program continues at the Wilds and has been modified for service learning projects, teacher development presentations and other programs.



**Cincinnati Public Schools, Dater Montessori School, *ENCASE: Enjoying Nature Center as School Extension*, \$25,000, #03G-017, Contact: Susan S. VonderHaar, [vonderhaar.susan@EPA.gov](mailto:vonderhaar.susan@EPA.gov).**

Teaching staff and parent volunteers with appropriate expertise developed a comprehensive three-year curriculum of theme-based inquiry and monthly activities and supplies to utilize a new nature center and outdoor classroom on the school grounds. Developed and field-tested programs for ages 3-6, 6-9 and 9-12, reaching 600 students. Collaborators included Hamilton County Extension; Keep Cincinnati Beautiful; Hamilton County Department of Environmental Services; and the Greater Cincinnati Civic Garden Center.

**Ohio University-Chillicothe, Department of Geography, *What's Around Me and Why? Application of the Scientific Method to Study Ones Environment*, \$50,000, #03G-023, Contact: Gary Haynes, [haynes@ohiou.edu](mailto:haynes@ohiou.edu).**

Provided eight traveling trunks for all the school districts in Ross County, to help K-12 students explore their local environment, watersheds, and land use patterns. Trunks included GPS units, maps and aerial photographs, videos, environmental test kits and accompanying lesson plans aligned with state Academic Content Standards. Provided 40 hours of in-service training with graduate credit for social studies and science teachers. Trainings continue to be offered as spring and summer workshops in response to teacher demand. Project originally sought to reach 2,200 students. To date, 3,326 have participated. Several "trunk days" also brought resource personnel from local agencies and organizations into the schools. Collaborators included Chillicothe City Schools; Ross County Soil and Water Conservation District; Ross County Litter Control and Recycling Program; and Ross-Pike Educational Service Center.



**Russia Local Schools, *Preparing a Land Lab that will Turn Our Students' Environmental Learning Inside Out!*** \$9,201.00, #04G-007,  
**Contact: Steve Rose, (937) 295-3454.**

Provided an expanded outdoor learning area to service 452 students in grades K-12 with 12 new learning activities on plant competition; soil structure; water management; seed-fruit development; and plant-animal interrelationships. Facility included butterfly gardens, bird houses, feeders and baths, fruit tree plantings, sundials, native plantings and invasive plant identification, compost piles, a small pond and a vegetable garden.



**Miami County Park District, *Honey Creek/Upper Great Miami River Watershed Wide Education Extraordinaire***, \$41,595.00, #04G-034,  
**Contact: Cinda Hanbuch-Pinkerton, [cindahp@miamicountyparks.com](mailto:cindahp@miamicountyparks.com).**

Helped more than 2,000 elementary and high school students understand how to protect their watershed through creative combination of hands-on scientific outdoor investigations with music and art. High school students and teachers participated in watershed education trainings, then worked with park district naturalist staff to engage elementary students in interactive watershed presentations, models, games, field trips to the local wastewater treatment plant, and stream quality monitoring. Professional artists-in residence/ musicians Chris Rowlands and The Banana Slug String Band helped students create colorful banner-sized watershed murals and unique student-designed watershed costumes and puppets. Students also wrote, recorded and performed watershed songs for the community at the culminating Honey Creek Watershed Festival.



**Project Learning Tree-Ohio, WET, WILD and PLT – Correlations for all Three, \$45,960.00, #04G-043, Contact: [jen.dennison@dnr.state.oh.us](mailto:jen.dennison@dnr.state.oh.us).**

A team of formal and non-formal educators documented correlations between three national environmental education curricula and the Ohio Department of Education's new Academic Content Standards for K-12 science. A searchable database and Web site provides Ohio teachers with documentation to support inclusion of project activities focusing on land, air, water, plants and wildlife in their lesson plans. Collaborators included Ohio Department of Natural Resources' Divisions of Forestry, Soil and Water Conservation, Water and Wildlife.



**Keep Franklin County Beautiful, Envirocourt: From Violation to Justice, \$36,361.00, #05G-002, Contact: OEEF at (614) 644-2873.**

Used a mock trial format to teach 160 juniors and seniors at six high schools about environmental laws related to litter and illegal dumping, how they are broken, and how the judicial system manages offenders. Project incorporated an online inter-school forum; presentations by the county sheriff's office, participation in an environmental investigative workshop with the Ohio EPA; a field trip to the Franklin County Environmental Court; and mentoring by Otterbein College students. Multiple organizations collaborated.

**Willard City School District, Central Elementary School, Central's Green Space: Planting Seeds for the Future, \$5,000.00, #05M-012, Contact: Jennifer Daniel, [danielj@willard.k12.oh.us](mailto:danielj@willard.k12.oh.us).**

Enhanced an existing outdoor learning area with supplies and new lessons on gardening, soil quality, native plants, species life cycles, species interdependence and weather. Interdisciplinary activities include planting trees in the community, and, to investigate the process of raw materials to finished product, fourth grade social studies students made and marketed strawberry jam from strawberries they planted. The school's 600 students include a high population of migrant/Hispanic ESL (English as a Second Language) learners. The project included a component where 75 students in a six-week summer migrant school planted and maintained a vegetable garden, with some of the produce harvested by those students in the summer, and additional produce harvested in the fall by students in the regular school, with each group studying the other's role in planting and harvesting. Collaborators include the City of Willard; Huron County Soil and Water Conservation District; and Ohio State.

**Kent State University Child Development Center, *The Wetlands Project: Supporting an Early Childhood Curriculum*, \$2,148.00, #05M-025, Contact: Pam Hutchins, [phutchin@kent.edu](mailto:phutchin@kent.edu), 330-672-2559.**

Development of early childhood curriculum supporting increased knowledge of ecological systems, inquiry skills and a deeper understanding of children's relationships with the natural world. More than 100 Kent State Early Childhood undergraduate students were involved in learning appropriate strategies for working with children in this environment. Children engaged in many investigations including observation of animal tracks; identification of plants and wildlife; and classification of objects collected in the wetland. Through the use of digital photography, digital video and many other tools, all the participants were able to observe children's growing awareness and responsibility for the environment.

**Muskingum Family Y, *"Eco Club"*, \$4,981.00, #05M-028, Contact: Pam McFerren, [cmiraclemfy@sbcglobal.net](mailto:cmiraclemfy@sbcglobal.net).**

Provided eight naturalist-led field trips to nature centers, state parks and an arboretum for up to 200 children ages 7-14, during the summer and on Saturdays during the school year. Topics include geology; stream and forest ecosystems; wetlands; birds; insects; wildlife and habitat; land use changes; and wilderness safety and survival. Collaborators included Dillon State Park and Zane State College.

**Toledo Botanical Garden – Children's Education Department, *"Growing Science,"* \$4,988.00, #06M-005, Contact: Patty Toneff, [rentals@toledogarden.org](mailto:rentals@toledogarden.org).**

Provided one-hour classroom visits by TBG educators, followed by 14 two-hour field trips to the Botanical Garden for a total of 700 students from low-income areas, as well as in-service training and resource toolkits for participating teachers. Program included introductory activities and games designed to excite curiosity; exploration walks; hands-on learning activities; and educational games and crafts designed to develop a sense of wonder and respect for the environment. Topics included plant and animal interdependence; biological classification; soil formation and function; water quality; and conservation.

## 2008 OEEF Outstanding Projects Awards

**Clean Fuels Ohio, *Clean Fuels Grades 6-12 Educational Program*, \$49,877, #03G-050. Contact: Sam Spofforth, [sam@cleanfuelsohio.org](mailto:sam@cleanfuelsohio.org), 614-292-5435.**

In collaboration with the Ohio Energy Project, provided three curricula on alternate fuels and efficiency in transportation aligned with Ohio's new academic content standards. During the first year, piloted the curriculum in at least four middle and four high schools in Franklin and adjacent counties. During the second year, implemented the curriculum in a minimum of 10 middle and 10 high schools, reaching up to 780 total students. Held more than 10 educator workshops/mini-sessions hosting 500 teachers in the piloted counties.



**Adams County/Ohio Valley Schools, *Adams County Environmental Project*, \$44,861, #04G-074, contact: Donna Shepherd, [coshepherd@ovsd.us](mailto:coshepherd@ovsd.us), 937-544-5586.**

Provided a year-long series of local environmental investigations for 5th- (Water Quality Field Work), 7th- (Conservation Field Day,) and 10th-grade (macroinvertebrate water quality study and local Envirothon competition) students. Each school set up six Global Learning and Observations to Benefit the Environment (GLOBE) atmosphere stations, and science teachers received GLOBE training in the four major protocol areas (soil, hydrology, land-cover and atmosphere). Students continue to use the equipment and monitor various environmental areas. Students participated in a community atlas project and were awarded Environment Systems Research Institute (ESRI) ArcView software. Students collected data and made maps of the study sites. Adams Soil and Water personnel set up and continue to hold conservation field days and a local Envirothon competition. High school students continue to study macroinvertebrates and present evaluation of a local pond to the pond owner and Adams Soil and Water.



**Lourdes College, *Four-Season Natural Science Exploration: Ohio Bio-Region*, \$49,890, #05G-022, Contact: Sr. Rosine Sobczak, [rsobczak@lourdes.edu](mailto:rsobczak@lourdes.edu), 419-824-3691.**

Provided training for 24 northwest Ohio teachers regarding integration of hands-on natural science field and classroom activities related to Ohio's biome communities and changing seasons. This holistic approach to environmental understanding can nurture teacher/student interest in exploring Ohio's flora and fauna, connecting native species, and life cycle learning with a habitat-enhancing raise and release program, while utilizing current technology to journal the results. Half the teachers were from Toledo urban schools and half from surrounding counties. Included field trips for the teachers to Magee Marsh, Campbell Prairie and Oak



Openings, as well as two seasonal life lab field trips for each teacher's students. Collaborators included the Toledo Public Schools; Toledo Diocesan Schools; and Lucas County Schools.

**Pickerington Local School District, *History of Changing Places at Tussing Elementary*, \$49,9884, #05G-028, Contact: Mary Sheridan, [marysheridan1@mac.com](mailto:marysheridan1@mac.com), 614-837-8078.**

Changing Places: Coming Home built on two previous award-winning projects funded by OEEF and the Ohio Arts Council, where artists-in-residence helped Tussing students and teachers explore the history and use of the land around their school and its wetland and prairie ecosystems. Students communicated their findings to the local community through student-made films; storybooks; quilts; murals; paper-mache puppets; a ceramic mural; and a 20-foot whale sculpture that has "traveled" to the school from a whale listening station in Alaska. The station partnered with the students in their effort to record sounds in the school's wetland area. To help satisfy a rapidly growing statewide and national demand for information about these projects, the grant supported creation of an implementation guide for incoming teachers at Tussing and other schools. The guide included a variety of components including a children's book; a trilogy of films sharing three original songs written by the students with imagery highlighting activities; a history and field guide that illustrates the work of and vision for including the diverse partners (artists, authors, community resource personnel) who contributed to this innovative and fun exploration of the school's ever-expanding backyard.



**Upper Valley JVS, *Students Teaching Students...A Rippling Effect in Environmental Education*, \$39,683, #05G-056, Contact: Jim Metz, [metzj@uvjvs.org](mailto:metzj@uvjvs.org), 937-778-1980.**

Equipped the Willowbrook Environmental Education Center and the surrounding wetlands, wet meadows and forested vernal pools with learning stations to provide natural and wetland education to the approximately 600 third graders and others who visit annually. JVS Environmental Occupations students in 11th- and 12th-grade received training in nature and wetland interpretation and then served as nature guides for all tours given at Willowbrook. Utilized hands-on activities from national curricula such as Wonders of Wetlands; Project WET; and Healthy Water, Healthy People. The JVS provided annual workshops on wetlands and water quality to primary and secondary teachers. The Willowbrook Environmental Education Center strives to meet the needs of anyone seeking programming to educate people about the environment, with special emphasis placed on wetlands and water quality. Collaborators included the Miami and Shelby Soil and Water Conservation Districts; Miami NRCS Service; Miami County Park District; and Top of Ohio RC&D Council.



**The Botanical Garden Association, Inc., *UPSIDE Ohio (Using Plants for Science Instruction and Diverse Education)*, \$49,970, #05G-076, Contact: Paul Carmichael, [info@bcbgarden.org](mailto:info@bcbgarden.org), 330-862-3920.**

Provided a series of workshops to teach 192 teachers, 7,200 K-5 students and 100 community members about native Ohio plants and the impact of non-native invasive plants on the ecological integrity of Ohio's biological diversity. Equipped participating classrooms with the *GrowLab* indoor gardening system and curriculum of science inquiry activities and supported development of a native Ohio plant guide for dissemination in locations statewide. Stark County Educational Service Center collaborated.



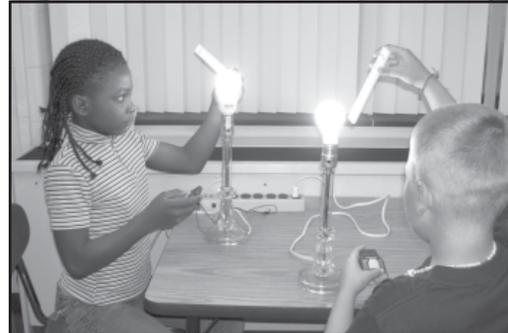
**Bowling Green State University, "EXCITE Odyssey," \$49,971, #06G-033,  
Contact: Jodi Haney, [jhaney@bgnet.bgsu.edu](mailto:jhaney@bgnet.bgsu.edu), 419-372-7361.**

Disseminated research-based professional development and inquiry-based, environmental education curricula to teachers throughout Ohio. More than 120 teachers participated in a two-day 'Odyssey Institute' where they learned first-hand how to implement the Project EXCITE problem-based learning and interdisciplinary curricula (Odysseys). Teachers received their choice of one Odyssey (topics vary, but all focus on environmental health issues such as use of pesticides; indoor air quality; germ transmission; chemical safety; food safety; and old building health issues) and supplemental classroom materials. Several months later, teachers returned to the Follow-up Institute after piloting the materials in their classroom to debrief and reflect upon the teaching and learning experience. Teachers also learned how to develop their own problem-based environmental education unit. Three new EXCITE Odysseys (GermOdyssey, CafeOdyssey and MosquitOdyssey) were also developed and disseminated as a result of the grant. Provided graduate credit options to participants using funds from a separate federal grant (NIEHS). Encouraged teachers to bring student teams to present at the annual Project EXCITE Research Colloquium held at COSI-Toledo.



**Ohio Energy Project, *Environmental Impact Education*, \$50,000, #S-07G-058, Contact: Deborah Yerkes, [swenergy@infinet.com](mailto:swenergy@infinet.com), 513-688-1717.**

Using a standardized Home Energy Efficiency Kit, the Ohio Energy Project introduced teachers, students and parents to basic concepts of energy use and energy conservation with activities focused on home energy savings. Introduced students to methods of measuring energy usage, determining costs and quantifying environmental effects. Presented six energy efficiency lessons in the classroom and encouraged students to take home ideas about ways to lower energy consumption through a variety of efficiency measures from the Home Energy Efficiency Kit. In the process, parents and families utilized practical ways to be energy efficient. Collaborators included: Duke Energy; Niagara Conservation; the Ohio Department of Development Office of Energy Efficiency; and 40 participating teachers.



**Waynesfield Goshen Local Schools, “Nature’s Restaurant...Education with a Taste,” \$4,521, #F-07M-014, Contact: [cweaver@auglaizeesc.org](mailto:cweaver@auglaizeesc.org), 419-568-4451.**

Provided an educational garden where pre-school students and parent volunteers grew plants to attract birds and butterflies, as well as provide pizza ingredients, strawberries, potatoes and pumpkins to be used in school programs. Incorporated activities into the curriculum using *Habitats for Learning: A Planning Guide for Using and Developing School Land Labs*, an outstanding resource funded by a previous OEEF grant. Collaborators included the local Future Farmers of America chapter; Auglaize Soil and Water Conservation District; Top of Ohio Resource and Development Council; and Kaufman’s Backyard Gardens.



**Greene County Park District, "Footpath Through History," \$3,381, #06M-031,  
Contact: Christine L. Barnett, [cbarnett@co.greene.oh.us](mailto:cbarnett@co.greene.oh.us), 937-562-7469.**

Provided a field trip to Indian Mound Reserve for 1,300, 3rd- to 5th-grade students to learn how the environment affected runaway slaves following rivers northward along the Underground Railroad. Students studied the geology and geography of Massie's Creek Gorge and land-use changes from the mid 19th into the early 20th century. Students used critical thinking skills to see if they would be able to make it to freedom, by investigating what wildlife would have been present; what plants would be safe to use for food and medicine; what water is safe to drink; what places would make safe hideouts; and how to use trees, stars and different kinds of maps to find direction. Grant funds also provided artifacts, clothing, multimedia equipment and supplies for educational trunks that participating teachers checked out. Collaborators included the National Afro-American Museum and cultural Center in Wilberforce.

**Cleveland Municipal Schools, James Ford Rhodes Educational Campus,  
"Investigating Environmental Impacts on Two Local Urbanized Watersheds,"  
\$5,000, #F-08M-022, Contact: James Gazda, [jgazda52@aol.com](mailto:jgazda52@aol.com), 440-884-4076.**

One of three mini grants which supported northeast Ohio high schools participating in a regional, collaborative research project on the ecological and social consequences of urbanization of streams and river. Introduced 79 high school science students to two neighborhood watershed systems (Big Creek and West Creek) and the impacts of urbanization and watershed evaluation methodologies. Twenty-one student research teams (approximately four students per team) identified and investigated several distinct areas of a watershed: chemistry; biodiversity; physical characteristics; riparian zone and human impacts. Conducted research over a 9-week period that also included field investigations of the two watersheds. One week addressed preliminary discussion, planning and literature searches. The remaining eight weeks addressed preparation of reports and presentations. Purchased equipment and supplies to assist students in their research. Each student team maintained a research binder and presented their results to their peers through prepared visuals (tri-folds, posters, numerous photographs, drawings and one video), plus several oral presentations utilizing PowerPoint, Excel spreadsheets and graphs. Each team produced one classroom activity, and a handout or brochure that reflected an important aspect of their project. The top five research teams visited Cleveland State University on May 22, 2008, to present and display their projects at a research symposium. Students from Collinwood High School (Cleveland) and Harvey High School (Painesville) presented similar research projects.





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