



Environmental Education Council of Ohio

Annual 101 Educator's Conference Celebrates 40th Anniversary

By Alli Shaw, Sharon Woods Metropark.



What do you get when you combine a beautiful setting, creative small group sessions, camaraderie, networking, stellar keynote entertainers and evening campfire songs? Well the Annual 101 Educator's Conference, of course!

"The 101?" you say. Such an odd name! And like the stories at camp, the name has its own story: Many years ago, 40 to be exact, a group of educators gathered at Bob Terwilliger's cabin in Adams County and lamented the fact that

children and teachers just did not get outside anymore (sound familiar?) The clever title "101 Ways to Teach the Out-of-Doors" came about. Titles have morphed into a variety of subjects from energy to education standards. Over the years, all kinds of educators attended and all kinds of sessions were presented. Everyone learns something valuable. Theresa Barber takes ideas back to Columbus and applies them at her inner-city school. If you can't bring the kids to the outdoors, you can learn new ways to "bring the out-of-doors in."

At the current \$30 fee, it is an absolute bargain for the personal and professional fulfillment gained. Optional free overnights (Friday and Saturday) and Sunday morning hikes are even more of a bonus. And there are children's activities if you would like to introduce your family to the environment. Camp Kern is gracious enough to extend this wonderful offer year after year after year. But a conference at the same place each year? Again, how odd. How could new ideas emanate if you are going to the same place? It happens. You should check it out. For many of us, camps are a special place. Camp Kern is no different. There is wonderful energy there – like nature is giving you a giant hug.

By default, the Outdoor Education director of Camp Kern is always the conference chair. There have been only a handful over the years. Current chair Dave Moran (going on 16 years as the O.E. Director) is gracious for camp as well as EECO and OEEF for supporting the conference over the years.

Continued on page 2



Issue Focus:

Using Technology

Fall 2015

Save the Date

More information about each opportunity at www.eeco-online.org

OEEF Grant

Letter of Intent due Jan 8, 2016
Grant Due Jan 15, 2016
www.epa.state.oh.us/oef/

Wetland Wildlife Habitat Workshop

September 12, 9 am - 12 noon
Celina, Ohio
Registration Required: See
<http://tinyurl.com/WetlandWild>

Farm Science Review

Sept 22-24, London, Ohio
<http://fsr.osu.edu/>

101 Alternatives to the Chalkboard Conference

Oct 10, at YMCA Camp Kern,
Oregonia, OH
See page 2 for details

Ohio Chemistry Tech Council: Teachers, Industry and Environment (TIE) Conference

Oct 21-23, Columbus, Ohio
<http://tinyurl.com/nzet7ac>

Grant Writing 101/102 Workshop

Nov 3, 9 - 3:30, Coshocton, Ohio
Contact Dennis Clement
dennis.clement@epa.ohio.gov

Ohio Community Wildlife Cooperative Conf

November 5th, at the Nationwide & Ohio Farm Bureau 4-H Center!

Annual 101 Anniversary Continued



Gail Doyle reflects on her many 101 Conferences: "It's an annual opportunity to look within and reconnect with the reasons we do what we do." Paul Knoop, another 101 founder, can count on one hand the conferences he has missed. Being one of the founders, he continues to tout the 101 for its ability to connect like-minded folks in the environmental field and also have a great outdoor experience. For many, the friends made are the most important part of attending this conference.

I, for one, have attended the 101 Conference for a number of years

and served on the planning committee for 12. As a youngster naturalist working at Kern in 1996, I had heard of this conference. Then one night, over a hundred people converged on the camp and I attended sessions led by legendary educators such as Jane Forsyth (geology) and John White (archaeology.) I was in awe. So much knowledge and interdisciplinary weaving. As Mike Stewart said, "Jane tied everything together. This bird is here because this tree is here. This tree is here because the soil is here. This soil is here because of the rocks that are here. The rocks are here because of the glaciers that were here...." Dr. White, led a session that involved digging in a camp trash can. Modern-day archaeology. It was fabulous.



Where do you come in? October 10, 2015. We need you. We need you, young or old, just starting or retired, to continue this wonderful tradition of rejuvenation of why you do what you do. If not for yourself, for those you educate and work with. Marne Titchenell claims that it is the perfect mix of expertise and outdoor fun and is one of her favorites. I'm betting it will become one of your favorites as well.

And don't forget pawpaws. There are pawpaws. Something Huck Ford always looks forward to. Are you interested now? It's a good time, folks. You should check it out.

For more information and to register, please contact Dave Moran at dmoran@daytonymca.org or check out the EECO website at <https://eeco.wildapricot.org/>. Special thanks to those who took the time to send me creative words and thoughts and inspiration for this article.

SAVE THE DATE!!!!!!

for the

101 Alternatives to the Chalkboard

**40th Annual Educators' Conference
Saturday October 10, 2015
At YMCA Camp Kern,
Oregonia, Ohio 45054**

Cost: \$30 Includes meals and program. No additional charge for overnight stays. Scholarships and discounts available.

Overnight: Option of staying Friday and/or Saturday night.

This year's keynote presenter will be Ken Bowald.

We are currently finalizing keynote presenters and seeking small group session presenters. If you want more information, an updated flyer, or are interested in presenting, please contact Dave Moran at dmoran@daytonymca.org 513-932-3756 x 1527.

This event made possible by:

YMCA Camp Kern
the Environmental Education Council of Ohio, and
the Ohio Environmental Education Fund.



OEPA Funds Water Quality STEM Projects

The Ohio Environmental Education Fund at the Ohio EPA has two recent grant closures that might interest a water quality monitoring enthusiast.

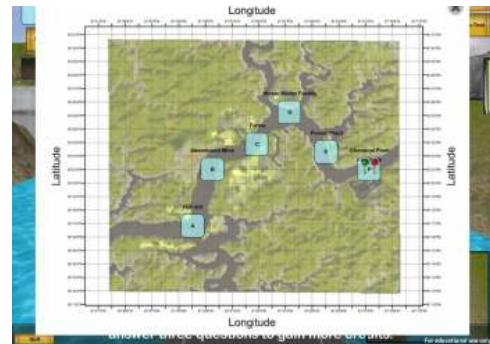
Virtual Boat for Environmental Education in Ohio (VBEE)

The Ohio University (OU) – Civil Engineering Department completed the project Virtual Boat for Environmental Education in Ohio (VBEE). Engineering students created a virtual boat iPad and desktop computer game that let students conduct two and three dimensional water quality sampling along a virtual river. The game used an existing GIS database to simulate the current conditions along the Ohio River from Marietta to Gallipolis.

Structured lesson plans include a Water Quality Index, fish kill and pollutant locator using GPS. Students “tested” for dissolved oxygen, fecal coliform, biochemical oxygen demand, temperature change, total phosphate, nitrate, turbidity and total solids, with real results based on real data collected by the University and the Ohio River Sanitation Commission (ORSANCO). Southern (Meigs County) and Athens (Athens County) High School students tested the VBEE Model. For further details contact Tioa Chang at chang@ou.edu.



VBEE-Ohio



The expanded Geocaching game for pollutant locator in the VBEE-Ohio model

Watershed Dynamics for the 21st Century Learners

The second project is a water quality application that allows people to iPads while collecting field data. The North Central Ohio Educational Service Center, Seneca SWCD and Seneca High School Science teacher, Jon Darkow collaborated. The application will help students collect and store chemical (temperature, DO, pH and turbidity) and macroinvertebrate data to track water quality “trends” from year to year in the Sandusky River watershed in North Central Ohio.

Professional development for science teachers involved was a key component of this grant, along with educational trips to OSU Stone Laboratory for high school students and contributions from the Heidelberg University students with the National Center for Water Quality Research. For more information on this application, please contact Kathy Mohr at kmohr@ncoesc.org.



Students identifying macroinvertebrates in the lab



Using technology in the field for monitoring water quality

Ohio Environmental Education Fund

The Ohio Environmental Education Fund grant program is administered by Ohio EPA and awards general grants of up to \$50,000 and mini-grants between \$500 and \$5,000. The grants are funded by half of the civil penalties OEPA collects for air and water pollution control violations. Eligible recipients include environmental groups, public and private schools, colleges, local governments, among others.

The requests for OEEF general grant and mini grant proposals are now open in the eBusiness Center. The Letter of Intent to Apply must be submitted prior to submitting a grant.

For more information, please contact the Ohio EPA Office of Environmental Education

Phone: 614-644-2873

Email: oeef@epa.ohio.gov

Web: www.epa.ohio.gov/oee



Grant Writing Workshops

The Ohio EPA, Office of Environmental Education holds grant writing workshops around the state throughout the year. The next scheduled workshop is in Coshocton, Ohio on November 3, 2015. There is a \$10 fee to cover lunch. Please register with the Dennis Clement at dennis.clement@epa.ohio.gov. Send your \$10 registration fee to Coshocton SWCD, 724 South seventh St, Coshocton, Ohio 43812 and note "Grant Writing 101.102 Lunch" in the check's memo area.

Please visit the website to view the most up to date list of upcoming workshops www.epa.ohio.gov/oee

For additional information contact Dennis by phone at 614-644-2048.

Awarded General Grants April 2015

In the spring 2015 application cycle, Ohio EPA awarded grants for the following twelve projects, for a total of \$322,110.

City of Columbus - Department of Public Utilities, "Blueprint Green Infrastructure Maintenance Workforce Development Program," S15G-062, \$49,938

Franklin County, Audience: General Public.

Contact: Keena Smith, kmsmith@columbus.gov, (614) 645-0807

A Green Infrastructure Workforce Development training program is being developed to address poverty and unemployment and create green-collar jobs. The six week training course will focus on water, wastewater and storm water infrastructure; basics of soil and ecology; and greenspace maintenance. Week six of the program will include work experience field trips to the Franklin Park Conservatory, Grange Insurance Audubon Center and vacant lots that have been converted to storm water projects. Graduates of the program will receive a training certificate that will be recognized by the City and will be offered intense placement assistance in securing a green infrastructure maintenance job. The Columbus Urban League and Columbus State Community College are collaborating.

City of Mentor, "Mentor Natural Areas Restoration Programs," S15G-058, \$14,771,

Lake County, Audience: General Public.

Contact: Nick E Mikash, mikash@cityofmentor.com, (440) 974-5717

The project expands the scope of the City of Mentor's outdoor educational programming, while controlling invasive species. Educational programs geared toward young people will include three native species planting project demonstration sites, a restored lake overlook, native butterfly garden and tall grass prairie. Guided hikes, workshops and conservation activities for the public will include invasive species identification and removal, rain barrel and nest box construction, and identification of native and migratory plant and animal species. Classes will highlight the City of Mentor's Restoration Project Sites and help promote awareness of the city's enhanced stewardship efforts. Mentor Public Schools and local Boy Scouts are collaborating.

Dayton Society of Natural History, dba SunWatch Indian Village/Archaeological Park, "SunWatch Prairie Restoration," S15G-051, \$28,634

Montgomery County, Audience: General Public.

Contact: Mark Meister, mmeister@boonshoftmuseum.org, (937) 275-7431

Approximately five acres of prairie inside the SunWatch Indian Village/Archaeological Park will be reclaimed to increase biodiversity and improve air quality. Restoration of the prairie will include seeding grasses, prescribed burns, and removal of invasive plants. A series of interpretive signs will discuss the role and importance of native plantings, pollinators and prairie animals. Each year, an estimated 16,000 – 28,000 people and an additional 6,000 – 7,000 students visit the site.

Awarded General Grants April 2015

ECO Center, "Outdoor Education Learning Circuit," S15G-033, \$12,314

Morrow County, Audience Preschool-University (Grades K-8).

Contact: Francisco Ollervides, [\(914\) 400-8210](mailto:follervides@hotmail.com)

A circuit of interpretive/educational stations will be established at an outdoor education center serving schools in Marion and Morrow Counties, to educate teachers, students and the community about habitat restoration and biodiversity. The project includes installation of a butterfly/bird garden, interpretive wooded trail, and a species diversity station that challenges participants to touch, examine and identify organisms. Over 2,000 students are expected to be reached through the project and lesson plans are aligned with Ohio's New Learning Standards.

Friends of the Lower Olentangy Watershed (FLOW), "Adopt Your Waterway Training," S15G-055, \$7,753

Franklin County, Audience: General Public.

Contact: Laura Fay, [\(614\) 267-3386](mailto:info@olentangywatershed.org)

The project will focus on increasing citizens' knowledge and awareness of the physical, chemical and biological aspects of water quality in their neighborhood streams. Approximately 100 residents within the lower Olentangy watershed will be educated on watershed issues and water quality. FLOW members will also be trained to become sampling coordinators to encourage and train volunteers to become Water Stewards and regularly collect water samples in their area. Classroom sessions will be aimed at the broader public and hands-on sessions will educate FLOW sampling coordinators. ODNR Scenic Rivers, the Sierra Club and Franklin Soil and Water Conservation District will collaborate on the project.

Mayor's Office of Sustainability, "Storm Water Management Training for MS4 Municipal Employees in Northeast Ohio," S15G-045, \$13,974

Cuyahoga, Geauga, Lake, Stark and Summit Counties

Audience: Regulated Community. Contact: Cathi Lehn, [\(216\) 664-2421](mailto:cleh@city.cleveland.oh.us)

Provides two-hour training modules, half-day workshops, site tours and supporting materials for employees of MS4 (municipal separate storm sewer system) regulated communities in Northeast Ohio on the proper maintenance of storm water management features. Training will focus on green infrastructure such as bioretention cells, permeable pavement, green roofs, and urban tree plantings. Curriculum development and training will be provided by storm water professionals in the region and scheduling will be coordinated through the City of Cleveland Mayor's Office of Sustainability. Collaborators include the Chagrin River Watershed Partners, Cleveland Metroparks Watershed Stewardship Center, Cuyahoga and Lake Soil and Water Conservation Districts, Northeast Ohio Regional Sewer District, Northeast Ohio Storm Water Training Council, and West Creek Conservancy.

New Philadelphia City Schools, "LIFE: Learning In Forest Ecosystems," S15G-036, \$21,305

Tuscarawas County, Audience PreK-University (Grades 5 and 12).

Contact: Joseph Brady, [\(330\) 364-0644](mailto:bradyk@npschools.org)

The project will engage students and the general public in experiences that improve their understanding of local wildlife, historic land use and the importance of efforts to restore native forest ecosystems. High school students will conduct a series of field studies to investigate the long-term effects of surface mining and reclamation on bird, mammal, amphibian and plant diversity in local forests. Students will then share their knowledge of these organisms and historical land use with fifth grade students at four elementary schools through a series of natural history tours at regional nature centers. Students and community members will then collaborate to create a long-term field experiment at the Norma Johnson Center to determine if vernal pool habitats offer an effective restoration strategy for improving amphibian diversity in former surface mining sites.

Ohio Interfaith Power and Light - Ohio Council of Churches, "Cool Congregations: Profiles in Earth Stewardship," S15G-057, \$32,157

Statewide, Audience: General Public.

Contact: Sara Ward, [\(614\) 561-6629](mailto:sara.ward54@gmail.com)

Over a two-year period, college student interns will be partnered with host congregations and faith-based organizations to help plan, prioritize and implement initiatives and research sustainability options such as energy conservation actions that would benefit the host site. Through this partnership between student and congregation, each will build skills in sustainability through hands-on experience. will include workshops, educational events, facility energy and water use audits, and Green Team development. The Cool Congregations will be featured in video profiles and on the OhIPL Earth Stewards Directory of resources, sharing their successes and providing inspirational examples for other congregations and persons of faith.

The Ohio State University Newark - Evolution, Ecology and Organismal Biology, "Educational programming on pollinator conservation and habitat restoration," S15G-056, \$15,147

Muskingum County, Audience: PreK-University (Grades 3-12).

Contact: Karen Goodell, [\(740\) 366-9101](mailto:goodell.18@osu.edu)

A permanent exhibit will teach visitors to the Wilds, a reclaimed mine site and conservation facility in Muskingum County, about the role of native bees in pollination and their habitat requirements. The exhibit will link to ongoing research at the site on the effects of native plant restoration on pollinators. The project will include a series of posters addressing key issues pertaining to pollinator conservation, and two-day workshops on native bee taxonomy, ecology and conservation for the Wilds staff. A native prairie meadow restoration plot will be created on the summer camp campus, and content and equipment provided to enable student campers to conduct research on pollinators and compare their results with the University research data.

Ohio State University - Stone Laboratory, "Communicating water quality data to the public and students, including charter boat captain sampling," S15G-042, \$43,293

Ottawa County, General Public.

Contact: Justin Chaffin, [\(419\) 285-1845](mailto:chaffin.46@osu.edu)

This Citizen Science project involves students, teachers, and adults in water sample collection on Lake Erie for researchers studying cyanobacterial blooms and nutrient runoff. Water samples will be collected during Stone Lab field trips and by charter boat captains to be analyzed by Stone Laboratory's water lab and processed for concentrations of microcystin, algae biomass, and several other water quality parameters. Data will be posted to the OSU Stone Laboratory webpage and provided on fact sheets for the captains each week, to share the information with their charter clients. Tours of the water quality lab will also show students and visitors how scientists who study Lake Erie and algal blooms process a water sample for water quality parameters. The Lake Erie Charter Boat Association is collaborating.

**Perry Soil and Water Conservation District, "Water Quality Investigation of Jonathan Creek," S15G-034,
\$32,824**

Muskingum and Perry Counties, Audience PreK-University (Grade 7).

Contact: Penny Cox, penny.cox@oh.nacdnet.net, (740) 743-1325

A hands-on, inquiry-based project will introduce seventh graders in New Lexington and Sheridan Middle Schools to water quality issues such as nutrient loading and bacterial contamination in a local watershed. Classroom presentations will cover using topographic and aerial maps to study the watershed; how to test for the different contaminants found in the Creek; how to conduct a biological stream assessment; and related environmental careers. Students will visit the creek twice during the school year to conduct chemical tests and kick-seine for macro-invertebrates as a biological indicator of water quality. Teachers will also be trained on standards-aligned water quality activities from the Project WET, Aquatic Project WILD and Healthy Water, Healthy People curricula. Collaborators include the Guernsey and Muskingum Soil and Water Conservation Districts and Rural Action.

Yay Bikes, "Helping festival attendees 'Pedal Instead' of driving," S15G-048, \$50,000

Franklin County, Audience: General Public.

Contact: Catherine Girves, catherine@yaybikes.com, (614) 371-8232

The project will expand awareness of the Pedal Instead bicycle valet service to encourage more people to ride bikes to events, reducing air emissions. A key component of the project will provide information about bicycle transportation to people and link them to on-road educational experiences to increase their cycling knowledge and confidence. Signs and print materials at events such as OSU home football games, neighborhood festivals, and the Columbus Marathon will address common obstacles to bicycling and trained volunteers will engage and educate prospective cyclists. At least 8,000 event attendees will learn about the service and 100,000 will encounter messages on the Pedal Instead bike corral.

Environmental Career Bingo and Classroom Activity

The Environmental Careers Classroom activity posted on the OEE website now has 40 Bingo cards that can be used in conjunction with the slide show. The slideshow has had several new careers have also been added, which now shows 52 examples of Ohioans in variety of environmental careers. You can print out the slides and clip them on students backs in a guessing game where they ask each other questions to figure out their assigned career.



National Center for Nature Photography

By Laura Schetter, EECO board member

Celebrate the wonders of nature and those who treasure it through photography" is the mission of The National Center for Nature Photography (NCNP). The NCNP utilizes environmental art to connect people to nature, thanks to advances of technology in photography. The National Photography Center is at Secor Metropark, one of the parks in the Toledo Metroparks system. It is open on weekends with free admission.

Shannon DeYoung, Director of National Center for Nature Photography commented on the value of their center as it contributes to environmental technology, "The world is a visual place, people are very familiar now with viewing everything through the lens of a camera whether it be on TV or otherwise. Photography ties people more closely to the natural world by forcing them to immerse themselves in the world they are photographing. You cannot get beautiful shots of a bird on your couch. Representing the beauty of nature through photography is as simple as allowing the natural world to speak to you. Technology is a great thing in many respects for nature photography as it allows even the casual user to get a great shot, while walking through the park or other natural scape. And sharing these images on social media is also a great way to bring the natural world closer and involve a myriad of individuals."



The photo center offers educational programs, classes, and in-the-field photography experiences. EECO board member Laura Schetter took a group of students there last year for a photo session at Secor Metropark. Her students first learned nature photo tips for beginners. They then had free time to put these skills to the test in the park. With little direction, these 10th graders occupied themselves for a couple hours literally looking at nature in a new lens! They laid on the grass to photograph a tree looking up. They laid on the forest floor to take a close up shot of ants or leaf litter. Kids who typically wouldn't like getting dirty did not hesitate to grass stain their clothes for a quality nature photo!

The NCNP aims to "display the finest nature photography through themed exhibits, master photographer shows and annual contests." The current exhibit "River of Many Faces," by Art Weber, uses over four dozen images to depict the Maumee River in all seasons. This connection to water that flows into Lake Erie is especially important for Ohioans after last year's water crisis. Hopefully it will foster a deeper appreciation for the Great Lakes tributary and connect us to care for the local watershed. The National Photography Center supports environmental educators! In the winter there will be a special exhibit to showcase the work of National Geographic Grosvenor Teacher Fellows. Photos will reveal the beauty of the unique ecosystems that the fellows embarked on a Lindblad Expedition, including the Arctic, Antarctica, British Isles, and Galapagos Islands. These teachers integrate these photos and the ecosystems they were framed in their daily classrooms. The National Photography Center not only celebrates these environmental educators, but also environmental education as a whole!

Website:

http://www.metroparkstoledo.com/metro/parksandplaces/index.asp?page_id=525

More information on the *River of Many Faces* exhibit:

http://www.metroparkstoledo.com/metro/parksandplaces/item.asp?item_id=6143



Upcoming Newsletters

Do you have a theme that you are interested in? Want to share information about a particular EE topic? If so, contact our newsletter committee about submitting articles, or even becoming part of the committee.

If you are interested in writing an article, our next planned issue is:

- Energy in Winter, article deadline is November 15

Articles are typically 400-600 words. As you can see, we like to include lots of pictures. If you submit photographs, please make sure they are of high quality/resolution, and are not copyrighted.

To find out more about how to submit, or to join our committee, contact Linda Ramey at lkramey8@gmail.com



Warren County Soil and Water Conservation District Dedicates State of the Art Water Education Trailer

Clean water is essential for life and sometimes it's difficult to educate people about how their actions can have positive or negative impacts on water quality. To give people a better understanding of water resources, the Warren County Soil and Water Conservation District recently completed construction of the Thomas C. Spellmire Water Conservation Education Exhibit. With help from the Cincinnati Museum Center, the Warren County SWCD built the 24 feet long interactive water trailer to educate people about water and why it is necessary to protect it.

The trailer is dedicated to deceased Warren County SWCD Supervisor, Thomas C. Spellmire. Spellmire served on the Warren County SWCD Board of Supervisors for 21 years and was passionate about the district's education program. After seeing the success of the Soil Trailer built by the Butler SWCD, Spellmire wanted to see Warren County build an exhibit dedicated to water. "One of the things Tom pushed for was the wow factor," says Jeff Thomas, Warren County SWCD Administrator. "The soil trailer made an impact on people and he [Spellmire] wanted the same thing." Thomas believes they got it.

The trailer is one of most innovative, high-tech exhibits to educate people about water in Ohio. Three interactive displays featured in the water trailer keep audiences interested and engaged, while educating them about three concepts: water shapes our land, water is life and water needs to be protected.

To demonstrate how water shapes our land, a unique sand table allows users to create landforms and motion censored technology projects waterways, topographic contour lines and rain into the sand. When users hold their hands above the sandbox to simulate clouds, rain and the movement of water will be projected on the display, showing how water moves across the landscape. There are fewer than 20 sand tables like it in the world. "With the sand table, adults will have their hands in it playing like the children do," says Thomas. "Once they see you can touch it, it pulls them in."

A virtual streambed featured in the trailer addresses the concept that water is life. Using a touch panel, users are presented with scenarios that will change the quality of waterways. The demonstration teaches visitors about species living in the stream and how individual land use affects water quality.



An interactive video display connects people with their watersheds and demonstrates that water needs to be protected. The exhibits push button display allows users to see how waterways are connected and how pollutants will impact other waterways. The display connects visitors with their watersheds and shows how their watershed connects to either the Gulf of Mexico or Lake Erie.

In addition to the technology inside the trailer, the exhibit contains an exterior wrap that can be used in demonstrations. One side shows a stream setting and the other displays a wetland. These displays will be used in habitat lessons to show students where different species fit.

Although the Thomas C. Spellmire Water Exhibit was just dedicated in June, it is already receiving rave reviews from people who have experienced it. Thousands have explored the exhibit through events like the Warren County Fair, the City of Mason's Bicentennial and an Army Corps of Engineers Junior Rangers event. The reactions have all been positive. "Demand is strong," says Thomas. "We could have it booked every weekend."

Now that the school year has arrived, the water exhibit will be making its way into Warren County classrooms. Warren County SWCD educators Amy Pond and Marta Farrell have developed lesson plans and curriculum associated with the exhibit.

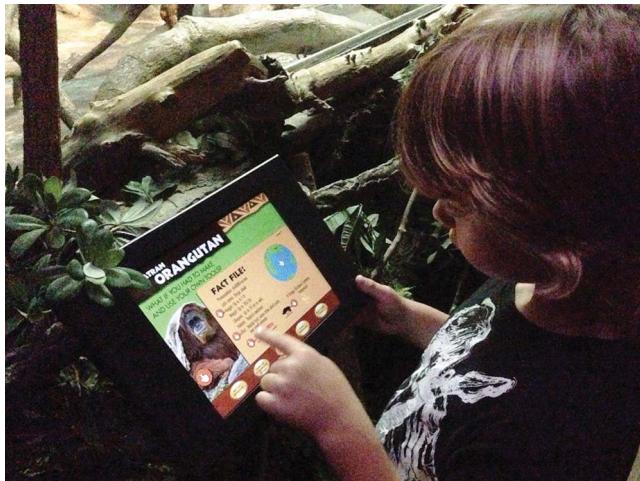


A portion of the funds to complete the exhibit were provided through an Ohio Environmental Education Fund grant through Ohio EPA. Additional sponsors include Peoples Community Bank, Trupointe, Duke Energy, City of Springboro, Deerfield Regional Stormwater District, Consolidated Grain & Barge, Miami Conservancy District, Western Water, City of Mason, Warren County Stormwater District and the Spellmire Family.

Using iPads to Connect Zoo Guests to Wildlife

By Elyse Lohrbach and Shasta Bray, Cincinnati Zoo

In an ever-changing technological world, many educators wonder how and when incorporating technology becomes important, especially for institutions that promote in-depth experiences with nature and wildlife. Whether or not we are ready to embrace technology as a doorway to meaningful zoo and aquarium interactions, technology is an everyday reality for our guests, and to meaningfully educate, we need to meet them where they are.



The Cincinnati Zoo recently incorporated iPad technology in two very different ways to enrich our guests' educational experience. With the Zoo's recent reinterpretation of our Jungle Trails exhibit with a focus on family learning, our indoor interpretative signage went digital. In place of traditional static panels, iPads create an interactive opportunity for our guests to learn more about our orangutans, gibbons and bonobos by engaging with indepth text, images, videos and games. Large screens mounted above the iPads allow whole families and other guests to see what's happening on the iPad. Guests can even scan a QR code from the iPad to continue their experience on their smart phones. The apps for these iPads were created through a combination of Illustrator, Photoshop, Dreamweaver, Adobe Edge, and the Kiosk Pro app. You can check out this amazing app yourself at <http://cincinnatizoo.org/jungle-trails/>.

We have also incorporated iPad technology into our volunteer education program at our Wild Discover Zones. These Zones are a supplementary interaction to key exhibits around the Zoo where volunteer educators engage guests on a deeper level. The iPads allow us to show pictures and videos to guests to highlight key features or interactions they wouldn't normally see. For example, at our Wild Discover Zone about birds, we are able to share pictures taken with a microscope of several feathers' unique structures, including the pigmentation of a macaw feather and the "wet suit" effect on a wet penguin feather. Pictures of birds in flight and wing types are also shared with guests. At our Manatee Springs Zone, we share a behind the scenes peek at how manatees are moved into the tank and share information from online sources such as field notes and maps showing where past manatee residents are now and how they are doing back in the wild. We try to incorporate iPads wherever we feel there is a need to share information and experiences beyond what the guest can observe or read standing at the exhibit.

While iPads have their challenges, such as protecting them from weather and wear and tear or teaching volunteers who have not engaged with this type of technology before, we feel the added experience for our guests is worth it. This technology can be used in a responsible way that enhances rather than takes away from a deep connection with wildlife.



2016 EECO Conferences: Save the Date

101 Alternatives to the Chalkboard

Saturday October 10, 2015 at Camp Kern

Winter Snow Conference

February 5-6, 2016 at Camp Nuhop

49th Annual Conference

March 31- April 3, 2016 at Mohican State Park Lodge

Now Accepting Applications!

Environmental Education Certification Program

Ohio's Environmental Education Certification program is one of eight in the country and has trained over 50 environmental educators from our state. It is a nationally recognized certification program based on competencies established by the North American Association for Environmental Education (NAAEE). Certified educators are currently working in the Cleveland Metroparks, the Ohio Department of Natural Resources, the National Park Service, the Miami County Park District, Dawes Arboretum, several school districts, and other agencies and organizations. They continue to produce high level work and recognize the value of having this certification.

Ohio's Environmental Education Certification program continues to train qualified environmental educators. Applications are now being accepted to enter the 2015/2016 cadre. This certification is a valuable asset to your experience which will distinguish you from other job seekers in your profession. Through this program you will obtain the skills and knowledge that lend credibility to your work and also be on the path to become a leader in Environmental Education in Ohio.

This training will require three workshops, culminating in a poster presentation and awarding of certification at the 2016 EECO Conference. The deadline to apply is September 10, and space is limited. Completion of the EE Certification training will provide sessions in the following competencies:

- Foundations of Environmental Education
- Knowledge of Environmental Process and Systems
- Personal and Civic Responsibility
- Planning and Implementing Environmental Ed.
- Fostering Learning
- Assessment and Evaluation

Ohio's EE Certification program is also considering an alternative format that could take place over the course of a week in the summer of 2016. This format could be ideal for classroom teachers and others who might prefer to complete their training and certification in condensed time frame. Contact us for more information and to be added to an interest list.

Visit www.eeco-online.org for more information and to download an application, or email Program Coordinator, Jennifer Buchheit at eecertification@eeco-online.org.



**2015 EE Cert
Graduates**

Project Learning Tree Facilitator Survey

PLT- Ohio recognizes our facilitators are the key to our terrific program. We are always looking for ways to assist facilitators and hope to incorporate your thoughts and suggestions into our upcoming strategic planning endeavor. You can help by taking between five and 10 minutes to answer this very easy 10 question survey by

September 4, 2015.

<https://www.surveymonkey.com/r/BD8GDQF>

Your input will guide us as we strive to provide support to our outstanding network of facilitators without whom the PLT Ohio would not be the success that it is! Everyone who participates in the survey has the opportunity to enter into a drawing for a \$100 Amazon gift card or a \$100 gift card to Ohio State Parks. Two names will be drawn at random on September 9, 2015. If you have any questions or comments, please contact us at 614-265-6657.

