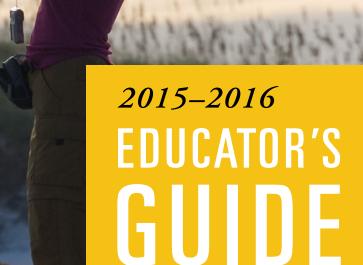
STAFF DEVELOPMENT AND RESOURCES



to Museum Services

North Carolina Museum of Natural Sc

Downtown Raleigh . corner of Jones & Salisbury Streets . naturals

WORKSHOPS AT YOUR SCHOOL

How many times has a child approached you with something clasped in her hands, eyes alight with wonder and curiosity, to show you a natural treasure she has discovered on your school grounds? The natural world can heighten the curiosity of a child in a unique and wonderful way. And it is becoming more and more evident that establishing a connection between children and nature is important and beneficial.

Your school grounds hold the key to harnessing your students' innate sense of wonder and turning their curiosity into a vehicle for learning science. And not only science: use your students' interest to spark enthusiasm for math, reading, writing, technology use and more!

The North Carolina Museum of Natural Sciences' School Grounds Workshops provide teachers with the knowledge and resources they need to take advantage of all that your school grounds environment has to offer!

- Reawaken your own sense of wonder.
- Discover the free resources that exist right outside your door.
- Take away resources to use in your classroom.
- Create or enhance a habitat area on your school grounds.

All workshops include activities and content that address many of the Common Core and Essential Standards at various grade levels. All workshops are conducted in a manner that demonstrates the concept of Science as Inquiry, including working in small groups, conducting investigations, and practicing careful observation. Workshop science content is most applicable to the Life Science and Earth Science strands of the Essential Standards. However, student interest in the natural world provides a bridge to many other subject areas and concepts in the Common Core Standards: reading informational text, critical thinking and analytical skills, writing, math skills and concepts, and solving real-world problems.

For information, contact Melissa Dowland, coordinator of teacher education, at 919.707.9898 or melissa.dowland@naturalsciences.org

WORKSHOPS AT YOUR SCHOOL

USING YOUR SCHOOL GROUNDS AS A TEACHING RESOURCE

3 hours

Fee: \$250 (includes classroom materials such as student field guides)

Class Size: 10-30 participants (teachers, aids, administrators, involved parents)

Register at least four weeks in advance.

Let Museum naturalists open your eyes to the amazing variety of native plant and animal life found on your school grounds. Gain activity ideas and content to help you become more comfortable using the outdoors as a classroom. We will tailor this workshop to the resources you have on YOUR school grounds!

CREATING SCHOOLYARD **HABITATS**

Two 3-hour sessions at least four weeks apart Cost: \$600 (includes native plants, habitat enhancement features, and classroom materials such as student field guides) Class size: 10-30 participants (teachers, aids, administrators, involved parents)

Register at least six weeks in advance.

Learn about the important features of a wildlife habitat and how to create one on your school grounds, and then install it with the assistance of Museum staff. Students are welcome to participate in the installation portion of the program (second session). Topics include butterfly gardens, bird observation areas, and school grounds wetlands. Other habitat features may be arranged on request.

USING THE OUTDOORS TO TEACH EXPERIENTIAL SCIENCE (UTOTES)

Six sessions over one school year

Cost: \$1,200 (includes classroom materials and equipment for each topic/session and native plants or other habitat enhancement materials)

Class Size: 16-24 participants in most sessions (teachers, aids, administrators, involved parents)

Applications for the 2016-17 school year are due April 22, 2016.

THE UTOTES PROGRAM INCLUDES:

- · Six workshops over the course of a school year to help foster a culture of outdoor awareness and environmental stewardship at your school: one session for a leadership team, four sessions for teachers/aids/volunteers, and one session in which students participate in the installation of a wildlife habitat of your choosing. Workshops cover topics and resources that are available on your school grounds in different seasons, encouraging the use of the outdoors all year long!
- · Materials that support the program and allow teachers to easily implement activities including tools and equipment, field guides and other references, activity guides and handouts, and plants and other resources for your habitat project. The cost of the program is returned to the school in resources.
- · A session with students to create or enhance an area for wildlife and learning on your school grounds. Typical projects include butterfly gardens, bird observation areas, and water gardens/mini ponds.
- Application information: naturalsciences.org/educations/for-educators/workshopsat-school

SPECIAL EVENTS FOR EDUCATORS

Calling all Educators! Are you looking for fun and engaging new ideas and curriculum-correlated lessons for your students? Have you always wanted the opportunity to talk one-on-one with the actual scientists and researchers studying the content you're teaching? Do you plan on bringing your class on a fieldtrip to the Museum this year? If you answered yes to any of these questions, then this event is for you.

SCIREN TRIANGLE AND EDUCATOR OPEN HOUSE AT THE NORTH CAROLINA MUSEUM OF NATURAL SCIENCES

Thursday September 10, 5:30-8:30 p.m. FREE; Registration required

The SciREN Triangle Networking Event and Museum Open House is an information exchange night just for educators! This event invites scientists and teachers from the Triangle/Piedmont region to interact in a relaxed environment. SciREN [Scientific Research and Education Network] is a network that connects scientists with K-12 teachers from across the state of North Carolina.

Find out resources and programs the Museum has to offer and meet more than 100 local scientists ready to distribute curriculum-centered lessons based on their research. This is an excellent way to rejuvenate teaching methods, integrate relevant and real science to student learning, and reach out into the community.

WHAT TO EXPECT:

- Free, curriculum-correlated K-12 lesson plans
- · Opportunities to talk directly with scientists
- Information about the registration process for field trips and classes, virtual education programs, outreach programs, and much more
- Opportunities to explore the Museum's interactive galleries and exhibits
- · Time to sign up for amazing professional development workshops both on-site and in the field
- Free Food
- · Great door prizes and giveaways

COST:

- FREE, but registration is required. Register at thesciren.org/networking-events/sciren-triangle/
- · All registered educators will receive raffle tickets to enter drawings for fabulous door prizes.

FREE PARKING: AFTER 5 P.M.

- · An above-ground lot is located one block east of the Museum (on Wilmington Street), with entrances on Jones and Edenton Streets.
- The Green Square parking deck is at the corner of Edenton and McDowell Streets, behind the Nature Research Center. The entrance to the deck is on Edenton between Salisbury and McDowell Streets. Exit the deck on the north side and you will be at the back entrance to the NRC.

For additional information about this or other Special Events for Educators, contact Megan Chesser at megan.chesser@naturalsciences.org or 919.707.9905.

Join us in the field and explore the remarkable natural history around you! Or come to the Museum and explore new ways to enrich your teaching. Our professional development workshops provide opportunities for educators to increase their knowledge of natural sciences, gain ideas for the classroom, and network with other educators.

Registration

Registration for most Educator Treks is on a first-come, first-served basis. Educator Treks fill quickly, so register early by filling out and mailing the registration form with your deposit check.

naturalsciences.org/education/for-educators/educator-trek.

Notification

You will receive a confirmation e-mail and mailed receipt for your deposit indicating acceptance into your chosen program(s). Workshop details will be e-mailed approximately two weeks prior to the workshop.

Renewal Credit

Educator Treks may be approved for renewal credits by your local school district. Participants receive a certificate for CEUs and credit for North Carolina's Environmental Education Certification Program.

Funding

Many school districts and civic and professional organizations provide financial support for educator workshops. Contact your district office about possible grants and scholarships.

FALL 2015

BRINGING CITIZEN SCIENCE INTO ENVIRONMENTAL EDUCATION

Prairie Ridge Ecostation, Raleigh, NC Saturday, September 12, 2015 9 a.m. – 5 p.m. Fee: FREE

CEUs: 7 contact hours

Citizen science is a valuable tool for teaching the public about the natural world. It provides non-scientists with an opportunity to contribute to real research and the data collected have led to important contributions to science. This workshop is designed to introduce educators of all types to the concept of citizen science and to provide them with the information, tips and tools they need to incorporate citizen science into their outdoor EE programs or lesson plans at their own sites.

SECRETS OF THE SWAMP

Roanoke River near Jamesville, NC Thursday, September 24 – Friday, September 25 Fee: \$15*

CEUs: 16 contact hours

Explore North Carolina's bottomland hardwood forest and experience a night in a remote swamp. We will camp on the Roanoke River Partner's platforms z the homes of beaver, barred owls, and migratory songbirds. Go to bed to the hootin' and hollerin' of barred owls and wake to the sweet call of prothonotary warblers. Become familiar with one of North Carolina's true wild areas and bring new ideas and activities back to your students!

*This workshop is being offered in conjunction with the Environmental Educators of North Carolina conference. Please visit the conference website to register: www.eenc.org

BUTTERFLY PINNING AND BACKYARD BUG COLLECTING

Nature Research Center, Raleigh, NC Thursday, October 15, 2015 6-8 р.т.

Fee: \$35 (includes insect resource manual, pinning board, butterfly display box, numerous exotic butterfly specimens) CEUs: 2 contact hours

Prepare, pin and mount a variety of spectacular tropical butterflies. Learn the various techniques used to catch, preserve and mount these and other fascinating arthropods. Explore the possibilities of insect collecting in your backyard.

USING YOUR SCHOOL GROUNDS -FALL

NC Museum of Natural Sciences at Whiteville Thursday, October 22, 2015 4-6 р.т. Fee: \$10

CEUs: 2 contact hours

Your school grounds holds amazing opportunities for teaching science and other subject areas. Join Museum educators to explore resources that are available in the fall right outside your school's door including caterpillars and trees. Walk away with new ideas and activities for exploring the outdoors with your students.

DISCOVERING ISLAND ECOLOGY THROUGH NATURE JOURNALING

Location TBA

Friday, October 23 (depart Raleigh at 3:45 p.m.) -Sunday, October 25, 2015

Fee: TBA (includes lodging, some meals, journaling supplies) CEUs: 20 contact hours

Discover nature journaling as a strategy for enhancing science learning. Explore a variety of coastal habitats and document your experiences using an assortment of journaling techniques including sketching, digital photography, poetry and reflective writing. You'll increase your understanding of these ecosystems and gain news ways to incorporate science and writing into your teaching.

GOT ELK?

Great Smoky Mountains National Park, Haywood County, NC Friday, October 30 (depart Raleigh at 3:45 p.m.) -Sunday, November 1, 2015

Fee: \$85* (includes transportation, lodging, and some meals) CEUs: 20 contact hours

Join us as we search for the majestic elk, reintroduced to the Smokies after an absence of more than 200 years. Sample activities used to document the biodiversity of the park. Discover how you can bring the excitement of field research into your classroom.

*The cost of this Trek is reduced thanks to a generous gift through the Friends of the Smokies. Due to this reduction of costs, Friends of the Museum discounts are unavailable.

WINTER 2016

WHERE SWANS FLY AND BEARS WALK

Pocosin Lakes National Wildlife Refuge, Plymouth, NC Friday, January 8 (depart Raleigh at 3:45 p.m.) -Saturday, January 9, 2016

Fee: \$90 (includes transportation, lodging, breakfast and lunch) CEUs: 12 contact hours

Experience one of the greatest wildlife spectacles in North Carolina — thousands of tundra swans, snow geese and other waterfowl over-wintering in an area rich in wildlife such as black bears, bobcats and red wolves. Learn winter bird identification, tips on preserving tracks and signs, and ideas for incorporating wild creatures into your teaching.

YELLOWSTONE IN WINTER

Yellowstone National Park, MT and WY Thursday, January 14 – Tuesday, January 19, 2016 (tentative) Mandatory orientation on Saturday, December 5, 2015, 12-5 p.m.

Fee: \$1,950 (includes airfare from Raleigh to Bozeman, MT; ground transportation; snowcoach tour; lodging and some meals) CEUs: 45 contact hours

Glimpse the spectacular natural wonders of America's first National Park and discover its charismatic inhabitants - elk, wolves, bison and more. Explore the connections between Yellowstone and North Carolina and discuss how to link your experiences to the classroom. Via the Museum's Web site, your students will be able follow our adventures in this winter paradise by reading daily journals and viewing pictures of the incredible beauty and wildness that we experience.

Due to the popularity, expense and extreme conditions of this trek, there is an application process. For an application, contact Melissa Dowland at 919.707.9898 or melissa.dowland@naturalsciences.org. No deposit is necessary until selections have been made. Applications are due at the Museum by Friday, September 25.

GRADING WITHOUT GRADES: FUN ASSESSMENT STRATEGIES

NC Museum of Natural Sciences, Raleigh, NC Thursday, January 28, 2016 6-8 pm Fee: \$10 CEUs: 2 contact hours

You need to know what your students are understanding and retaining, but grading daily homework is a chore and you feel exhausted thinking about yet another poster project or in-class presentation. What to do? Join us to discover tons of fun strategies for assessing learning, swap ideas for what works, and test out a few activities. From 1-minute check-ins to semester-long group projects, we have ideas for blending assessment with team-building, self-reflection, and group learning.

PELAGIC BIRDING

OFFERED AS AN OUTING FOR EDUCATORS AND THE GENERAL PUBLIC

Off the coast of Hatteras, NC Friday, February 12 (depart Raleigh at 3:45 p.m.) -Saturday, February 13, 2016 Fee: TBA (includes transportation, lodging, pelagic boat trip and some meals)

North Carolina has a huge variety of birds that visit the waters off our coast. Join Museum educators and ornithologists a we learn about and observe some of our amazing pelagic birds. Winter is also a great time to spot migrating marine mammals, and we hope to encounter these as well!

USING YOUR SCHOOL GROUNDS – WINTER

NC Museum of Natural Sciences at Whiteville Saturday, February 13, 1–5 p.m. Fee: \$10 CEUs: 4 contact hours

Your school grounds holds amazing opportunities for teaching science and other subject areas. Join Museum educators to explore resources that are available in the winter right outside your school's door including birds and animal tracks and signs. Walk away with new ideas and activities for exploring the outdoors with your students.

MAMMAL COLLECTIONS

NC Museum of Natural Sciences, Raleigh, NC Date: Friday, February 26, 2016

9 a.m. – 5 p.m.

Fee: \$35 (includes specimen preparation kit, specimen to prepare) This workshop is designed for environmental educators (i.e. park and nature center employees), however other educators are welcome to attend!

CEUs: 8 contact hours

Learn techniques used by Museum curators to collect, prepare and care for mammal specimens in a research collection. Get hands-on experience by preparing a study skin specimen for the Museum. Explore the Museum's vast research collection of mammals and discover options for developing a natural history collection for educational purposes.

SPRING 2016

USING YOUR SCHOOL GROUNDS – SPRING ... AND PADDLING!

NC Museum of Natural Sciences at Whiteville Saturday, March 12, 2016 9 a.m. – 5 p.m. Fee: TBA CEUs: 7 contact hours

Your school grounds holds amazing opportunities for teaching science and other subject areas. Join Museum educators to explore resources that are available in the spring right outside your school's door including wild-flowers and amphibians. Walk away with new ideas and activities for exploring the outdoors with your students. The workshop will end with an afternoon paddling adventure to explore the signs of spring on one of North Carolina's bay lakes.

NCCAT: EXPLORING LITERACY THROUGH SCIENCE AND HISTORY

NCCAT campus on Ocracoke, NC Tuesday, April 5 – Friday, April 8, 2016 Fee: FREE*

Have you ever stopped in your tracks to examine a beautiful shell or starfish on the beach? Does the name, Blackbeard send chills up your spine? Join educators from the North Carolina Museum of Natural Sciences and the North Carolina Museum of History to explore the rich natural and cultural resources of the Outer Banks. Immerse yourself in coastal ecology and follow the paths of influential historical figures to spark your interest and imagination. Learn to use these connections to expand student learning through reading, writing, and research. Human history and the natural environment are inextricably tied in our ever-changing coastal environment. This program will focus on the use of non-fiction texts, legends and historical fiction, and inquiry-based learning to make cross-curricular connections that enrich classroom instruction.

*This workshop is being offered in collaboration with the North Carolina Center for the Advancement of Teaching. Please visit their website, *nccat.org*, for registration information.

GIS IN YOUR SCHOOL: AN **INTRODUCTION**

Visual World Investigate Lab, Nature Research Center, Raleigh, NC Saturday, April 16, 2016 9:30 a.m. - 4 p.m. Fee: FREE CEUs: 6 contact hours

Are you interested in utilizing mapping and Geographic Information Systems (GIS) in your curriculum? This ubiquitous technology and its applications across science and society are powerful tools for understanding and exploring our world. Using a free GIS program that runs on any popular operating system, you will learn about the different types of GIS data, where to find data, how to use and manipulate data in a GIS and how to develop activities tailored to specific curriculum standards.

SPRING IN THE MOUNTAINS

Great Smoky Mountains National Park, Haywood County, NC Friday, April 29 (depart Raleigh at 3:45 p.m.) - Sunday, May 1, 2016

Fee: \$85* (includes transportation, lodging and some meals) CEUs: 20 contact hours

Great Smoky Mountains National Park is a hotspot for biodiversity and spring is a wonderful time to experience it! The park is also a crucible for studying how humans are impacting the environment. Participate in ongoing research projects studying the impacts of air quality and climate change and bring home ideas to teach about our interdependence with the natural world.

*The cost of this Trek is reduced due to a generous gift through the Friends of the Smokies. Due to this reduction of costs, Friends of the Museum discounts are unavailable.

BUTTERFLY PINNING AND BACKYARD BUG COLLECTING

Visual World Investigate Lab, Nature Research Center, Raleigh, NC Thursday, Date TBA 6-8 р.т. Cost: \$35 (includes insect resource manual, pinning board,

Prepare, pin and mount a variety of spectacular tropical butterflies. Learn the various techniques used to catch, preserve and mount these and other fascinating arthropods. Explore the possibilities of insect collecting in your backyard.

butterfly display box, numerous exotic butterfly specimens)

EDUCATORS OF EXCELLENCE INSTITUTES

Since 1987 the Museum's Educator of Excellence Institutes have provided exceptional educators with staff development opportunities that transform the way they view and teach natural sciences. Educators from across North Carolina have been inspired by their experiences in outstanding natural areas such as Belize, Ecuador, and Yellowstone National Park. These workshops are subsidized by the Educators of Excellence Fund, which enables selected educators to experience the natural world firsthand.

Read daily journals from the Museum's Institutes at naturalsciences.org/education/online-adventures.

Admission to the Institutes is through a competitive application process. Application forms will be available online in January 2016.

YELLOWSTONE NATIONAL PARK INSTITUTE

Dates: June 14-22, 2016 with an orientation at the Museum on Saturday, April 16, 2016

Location: Yellowstone National Park, WY and MT Activity Level: Moderate to rigorous, including walking/ hiking at high elevations

Cost: \$950 (includes round-trip air travel between Raleigh and Bozeman, MT, all ground transportation, instruction, and lodging)

Participating educators will study and experience the wonders of the world's first national park. Join us from sunrise to sunset as we observe the incredible wildlife including bears, bison, wolves and elk. Learn about the area's unique geothermal features and enjoy the magnificent scenery as we hike trails throughout the park. The daily program will include field experiences, opportunities to meet with park staff and local experts to discuss resource management issues, and activities to help bring these experiences into the classroom. Discover strategies for exploring the connections between Yellowstone and North Carolina (wolf and elk reintroduction, fire ecology, resource management issues in the parks, and much more).

TROPICAL ECOLOGY INSTITUTE

Dates: July 19-27, 2016

Location: Belize, Central America and Raleigh, NC Activity Level: Moderate to rigorous, including walking/ hiking in tropical (high heat/humidity) settings, canoeing and snorkeling

Cost: \$1,300 (includes supplies, round-trip air travel between Raleigh and Belize, all ground transportation, instruction, lodging and meals)

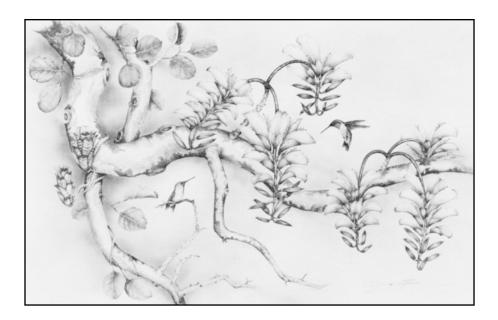
Participants will experience several tropical habitats, including coral reefs, mangrove swamps, and rain forests. The daily program will include practical field experiences, basic biological information, and easily duplicated techniques for teaching natural sciences. This program is designed to give educators a direct experience with environments and concepts that are part of the classroom curriculum. Participants will spend time at a Belizean school interacting with teachers and students.

EDUCATORS OF EXCELLENCE FUND

The Educators of Excellence Fund was founded on the idea of empowering educators by improving their teaching skills and inspiring them to remain committed to the profession of teaching. The Fund:

- provides a stable funding source for the Museum to continue and expand opportunities for experience-based teacher education,
- enables outstanding educators to experience the natural world firsthand,
- teaches students about our many ecological connections to the rest of the world by informing and empowering their teachers, and
- maintains a network for exceptional educators across the state for support and continued learning.

Support the Educators of Excellence Fund by participating in the Museum's annual fundraising event, by making a tax-deductible contribution or by ordering a Hummingbirds in Winter product.



Hummingbirds in Winter, by John Morgan Matyas, is available in full color in two formats:

- As 5" x 7" note cards; boxed set of eight cards \$10
- As an 18" x 26" signed and numbered limited edition print \$100

Ordering information can be obtained by calling 919.707.9893.

For more information contact Liz Baird, director of education at 919.707.9893, or liz.baird@naturalsciences.org.

The Educators of Excellence Fund is a program of the Friends of the Museum.

MUSEUM MEMBERSHIP FOR EDUCATORS

Teachers who join Friends of the Museum receive regular membership benefits, plus special benefits reserved just for you! For membership information or to purchase a membership, visit us online at naturalsciences.org/membership or call the Friends at 919.707.9846.

MEMBERSHIP BENEFITS

- Free or discounted admission to the Museum's Special Exhibits Gallery.
 Free or discounted admission to over 300 ASTC science centers worldwide.
- 10% discount at the Museum and Nature Research Center stores.
- Discounts on Museum birthday parties (Family level membership and up).
- Discounts and priority registration on Museum summer camps (Family level membership and up).
- Discounts on most classes, workshops and trips.
- Invitations to members-only events.
- Subscription to North Carolina Naturalist magazine.

ADDITIONAL TEACHER BENEFITS

- 15% discount on most Educator Treks.
- 15% discount at the Museum and Nature Research Center stores (additional 5% above regular membership).

MEMBERSHIP LEVELS

Individual: \$50 (plus tax*) Individual + 1: \$60 (plus tax*) Family: \$70 (plus tax*)

Visit naturalsciences.org/membership for a more detailed listing of all the Membership levels and their corresponding benefits.

Financial information about the Friends of the Museum and a copy of its license are available from the State Solicitation Licensing Branch at 919.733.4510. The license is not an endorsement by the State.

*In accordance with North Carolina state law, beginning January 1, 2015, the applicable sales tax will be added to membership dues at the time of purchase.

ONLINE RESOURCES

MATERIALS FOR EDUCATORS

Educator Mailing List

naturalsciences.org/education/for-educators

Join the Museum's Educator Mailing List to stay up-to-date on the Museum's education offerings. You can also use this link to update your mailing information.

Exploring North Carolina: DVD and Curriculum

naturalsciences.org/education/learning-resources/exploring-nc

Each episode in the series from UNC-TV is a mini-adventure featuring detailed information on the plants, animals, geology and history (natural and social) of North Carolina's greatest places.

FOR SCHOOL, HOME OR IN THE FIELD

Ask a Naturalist

naturalsciences.org/form/ask-naturalist

Got a natural history question? Found an interesting rock, bone or feather you'd like identified? Send us a message and we'll try to find an answer for you.

What Time is It In Nature?

naturalsciences.org/prairie-ridge-ecostation

Read periodic journal entries from the staff at Prairie Ridge, the Museum's field station located in west Raleigh.

FAQ Pages

naturalsciences.org/education/learning-resources/faq-pages

Find answers to Frequently Asked Questions about natural history.

Nature Notebooks

naturalsciences.org/education/learning-resources/nature-notebook

A guide to the animals, plants and other natural phenomena of the southeastern United States.

North Carolina State Symbols

natural sciences. org/education/learning-resources/nc-state-symbols

A guide to the official natural symbols of North Carolina.

Online Adventures

natural sciences.org/education/online-adventures

Throughout the year, Museum staff and North Carolina educators participate in field experiences that take them to fascinating places, from Yellowstone to the New World tropics. Daily journals are posted during each adventure.