



Focused Field Trips and Programs 2011-2012



• At The Museum

• At Your School

• Or BOTH!

For All Ages
**Live Animal
Program**

See page 7



MUSEUM
of LIFE +
SCIENCE

DURHAM



MUSEUM  of LIFE + SCIENCE

433 W. Murray Avenue, Durham, NC 27704
lifeandscience.org

- Included in **Top 25 NC Field Trips**
Carolina Field Trips Magazine 2010
- **Best Place to Entertain Kids**
Independent Weekly 2011
- **Favorite Area Museum**
Carolina Parent 2010 and 2011



Enjoy an additional
\$2 OFF
PER PERSON
SCHOOL GROUP ADMISSION
when you sign up for
a Focused Field Trip
See **page 10** for details

“
My class loved
the interaction between the
specialists and the equipment.
It really meant a lot to them to build
weather tools and see a few of the
things scientists actually use...”

- Will Price, Elon Elementary School

We'll provide materials to extend the Museum experience in your classroom!

AT THE MUSEUM

PAGE 2-5

180-MINUTE
90-MINUTE
50-MINUTE
**Focused
Field Trips**
led by Museum faculty

Treat your students (and yourself) to a private science lesson in one of our labs. Focused Field Trips make the most of Museum exhibits and resources to bring NC Science Standards to life. We offer an array of topics spanning life and physical sciences for preschool, elementary and middle school groups so that you can design a trip that best fits your needs.

AT YOUR SCHOOL

PAGE 6

**50-Minute
Programs**

Bring the excitement of the Museum's hands-on, minds-on educational programs right to your classroom! Choose from a variety of topics that correlate to the NCSCoS including StarLab, our portable planetarium and programs featuring animals from our live animal collection. All programs are led by experienced Museum faculty.

IMPORTANT INFO

PAGE 9

Plan your visit

PAGE 10-11

**Course list
and pricing**

**AT THE MUSEUM
OR AT YOUR SCHOOL**

PAGE 7

Animal Program

The Museum has a variety of live animals you can choose for your students to meet and touch!

PAGE 8

Star Lab

Learn to identify constellations in StarLab, the Museum's portable planetarium.

Science Nights

Bring the fun and excitement of the Museum to your school. We bring all the materials; you provide the space and participating students, teachers, and families.



**For reservations
and information**

Call (919) 220-5429 x313

Monday-Friday, 8:00 am to 4:30 pm



Are We So Different?™

A Project of American Anthropological Association

Oct. 8, 2011 - Jan. 22, 2012

lifeandscience.org/race

See dates and pricing pages 10-11

50 MINUTE FOCUSED FIELD TRIPS



Age 4 - Grade 1

Wind and Weather ☀️

Navigate our sailboat pond with radio-controlled sailboats. Launch seeds from the seed tower and watch how they move. Build a block city to see how air travels through towns. In this program, your class have private access to **Catch the Wind** exhibits to explore how wind affects plants, people and other animals.

Bear's Backyard 🐻

Get out of the classroom and up-close with our bears! Study the behaviors, diet and lifestyles of these beloved Museum residents.

Beneath Your Feet

There's a whole world hiding under your toes! Get the dirt on the rocks, sand, and soil beneath your feet. Investigate live earthworms, and make a worm painting to take home. Pan for gems in different types of dirt, and put on your miner's hat to explore our bat cave.

Incredible Insects 🐛

Want to be an entomologist? Explore the wide world of insects with us as we meet walking sticks, hissing cockroaches, and more! Discover different species of beetles, study a cricket up close, and make your own colorful insect to keep.

Myself and Others 🐾 **NEW!**

How are we alike? How are we different? Come celebrate the things that make us human beings. We'll use a high-powered dermascope to study our hair and skin, and we'll make different measurements to see how tall we are. We'll meet some live museum animals to discover what makes us uniquely human.

Rain or Shine

Become a junior meteorologist as you learn to use scientific tools to figure out which clothes would be best to wear for the day's weather. Measure the weather using thermometers, rain gauges and weather vanes, then share your predictions on "WMLS TV." Investigate moving air and even create a mini tornado to take home.

Super NanoScience **NEW!**

Let's learn about nanoscience! This super small science is changing the way we look at everyday objects. Bend our "memory metal" and see it change back to its original shape, right before your eyes. Drench a nanofabric with water, and watch how it mysteriously stays dry. Come join our nanoexperiments, as we discover how wacky things get at nanoscale!

Lilypad Pond 🐸

Who lives in the pond? We'll explore the plants and animals that make their homes in this habitat. Learn about the life cycle of a frog, and discover the different living things that we can find in each part of a pond. We'll even visit with a pond animal that lives here at the Museum!

Grades 2-3 Butterfly Life

Study these beautiful creatures and their fascinating life cycles. Look at real specimens, compare life cycles and make microscope slides of wings to take home.

Weather Watchers

Learn about the fascinating and sometimes unpredictable world of meteorologists. Use Vernier™ temperature probes to observe temperature change, uncover the science behind warm and cold fronts and create an anemometer to take home.

Life in Wetlands ☀️

Grab your dip nets and trek down to **Explore the Wild** to investigate animals and plants that thrive in our wetlands! Work with field guides and your educator to identify what you find.

Movers and Shapers

Give your bones, muscles and joints a round of applause! Investigate how these important body parts work together to keep people and other animals up and moving. Study our skeleton specimens and x-rays, experiment with our model muscle arm and learn how to keep your bones and muscles strong by eating right.

- ☀️ Outdoor programs
- 🐾 Animal programs
- ★ Star Lab

Grades 4-5 Force and Motion

Join us for a fast-paced, hands-on program that uses sail-cars and Vernier™ motion sensors to learn about the many forces that affect motion.

Minerals Rock!

Become a geologist and practice classifying rocks and minerals using tools of the trade. Learn how we use these minerals in our everyday lives.

Animal Eyewitness ☀️

Be a wildlife biologist! Observe our bears and wolves in their Museum habitats, and investigate how behaviors and adaptations are key to survival.

Junior Meteorologists

Join us as we create weather right here at the Museum! We'll make it rain in the room and craft a cloud in a bottle as we learn about weather patterns, the water cycle and storms.



Grades 5-7 Greenhouse Gases

Explore what gases comprise the Earth's atmosphere. Utilize Vernier™ CO₂ sensors and temperature probes to study the blanket effect of climate change and investigate various tools of solar technology.



90 MINUTE FOCUSED FIELD TRIPS

Grades 1-2

Essential Air ☀️

Gain private access to *Catch the Wind*, our outdoor area where you can explore how plants, people and other animals use air. Watch seeds float, spin and glide from our seed tower; shoot air cannons at mirrored discs; and captain a radio-controlled sailboat in our sailboat pond.

Grades 2-5

All About Invertebrates 🐛

We'll introduce you to some spineless wonders and get you set to study an invertebrate lifecycle back at school! We'll provide you with all the materials and know-how to continue discovering for weeks in the classroom.

Carolina Critters 🐾

What better way to learn about North Carolina wildlife than by seeing it face-to-face? We'll learn the skills necessary to track NC wildlife, meet three live critters that inhabit our state, and dissect owl pellets.

Lepidopterology

Learn about the anatomy and lifecycle of butterflies using microscopes and make a slide of a butterfly wing to take home. Then we'll head down to the *Magic Wings Butterfly House* to investigate the preferences of live butterflies.

☀️ Outdoor programs

🐾 Animal programs

★ Star Lab

Grades 3-5

Dancing with the Stars ★

Explore the cycles of the sky and discover why the stars and the moon seem to change over time. Learn to use tools that take advantage of the motion from above. Stargaze in the daytime as you experience StarLab, our portable planetarium!

Forces of Flight ☀️

We'll guide you through an exploration of the seed launch tower and sailboat pond in *Catch the Wind* to discover how plants and animals use the force of moving air for transportation and survival.



180 MINUTE FOCUSED FIELD TRIPS

Grades 4-6

Animal Behavior Field Study ☀️

Take on the role of wildlife biologists, recording the behaviors of our bears, wolves and lemurs using professional tools and equipment. Afterwards, data, photographs, and observations are used to build student-driven websites that allow them to share their findings and continue to access the information throughout the school year.

Grades 5-7

Sailboat Physics ☀️

Replace your current forces and motion curriculum of balls and ramps with our three-hour immersion, Sailboat Physics. Use motion sensors, low-friction tracks and laptops to analyze how forces affect model sail-cars. Your class will also enjoy private access to the Museum's 5000-square-foot sailboat pond.



Grades 5-8

Wetland Ecology Experience ☀️

Spend the day as limnologists in this three-hour immersion studying the wetland ecosystem. Use advanced scientific equipment and dip nets to collect water-quality data and identify organisms that live in the water. Then incorporate your findings into an ongoing study of the health of the wetland.

Rainforest Expedition

Take a guided tour through the Museum's *Magic Wings Butterfly House*. Examine epiphytes and a cacao tree and meet a live rainforest animal as we study the role of producers, consumers and decomposers. The program culminates with your class creating a digital presentation about the rainforest ecosystem to reinforce the topics of the day and extend the learning back to your classroom.



50 MINUTE PROGRAMS AT YOUR SCHOOL

Age 4-Grade 1

Amazing Air

Discover how air can push a pinwheel, power a rocket and even hold you up! Everyone will get a chance to make their own air-powered helicopter!

Dinosaur Detectives

Be a paleontologist. Uncover clues from the past. Dig for fossils, compare dinosaur sizes and reconstruct how you think dinosaurs looked, felt and sounded.

Meet the Turtles 🐢

Open your classroom doors to live turtles in a program that mixes art, science and storytime activities!

Midnight Movers 🦉

Sleep all day and creep all night - this is the life of a nocturnal animal. Shine your light like a firefly, become an owl and hunt for food, and meet a midnight mover, too!

Treasure Boxes

Explore our collection of treasure boxes as we observe, compare and sort valuable objects inside. Using our senses and some man-made tools, we'll hunt for treasure ourselves.

Oh My Stars! ✨

View some of the most famous constellations as we listen to stories that depict these pictures in the nighttime sky. Connect the dots and make up a celestial legend of your own with a take-home constellation craft.

Grades 2-3

Sounds of Music

What does a vibration have to do with sound? Investigate the highs and lows of pitch as we create instruments out of everyday materials.

Grades 2-5

Starry, Starry Nights ✨

Take a journey across the night sky! Learn easy ways to find some of the most famous constellations on your own as we travel through the seasons.

Grades 3-5

Many Moons Ago ✨

Act out the Earth's and moon's cycles to discover where our days, months and year come from. Climb inside StarLab, our portable planetarium, to observe and identify constellations that move in and out of view as the seasons change.

Grades 4-5

Circuit Builders

What makes a light bulb light up? How can we use electric current to do work? Find out as we manipulate materials to discover the world of electricity and electromagnets.

Tropical Topics 🐊

Look at rainforest products and meet an animal from this unique region of the world. Build rainforest towers and see if you can balance the health of your ecosystem with the success of your business.

Available at the Museum or at your school!

The Museum has a variety of live animals for your students to meet and touch! Are you learning about reptiles, nocturnal animals, or North Carolina species? Do you plan to study invertebrates, mammals or carnivores? Choose any four of our animals to customize a 50-minute Focused Field Trip at the Museum or program at your school that best fits with your curriculum.

For All Ages 🐾



Live Animal* Program

Choose from:

Mammals

Chinchilla, Ferret, Opossum, Rabbit, Degu

Reptiles

American Alligator, Ball Python, Bearded Dragon, Box Turtle, Corn Snake, Mud Turtle, Red-Eared Slider Turtle, Red-Footed Tortoise, Gecko

Birds

Blue Jay, Silkie Chicken, Red-Tailed Hawk (on-site only), Barred Owl

Amphibians

Tiger Salamander, Yellow-Spotted Salamander

Invertebrates

House Cricket, Giant African Millipede, Giant Prickly Stick, Land Snail, Madagascar Hissing Cockroach, Rose-Hair Tarantula, Vietnamese Walking Stick



* All animals subject to availability

🐾 Animal programs

✨ Star Lab

At the Museum OR at your school...

See pricing page 11

Science Nights

Reserve an exclusive evening at the Museum for your students, families, and staff. Enjoy up to 3 hours exploring our main Museum building. Available 5:30-8:30, Monday-Friday

Or bring the fun and excitement of the Museum to your school! We bring all the materials; you provide the space and participating teachers, students and families.

★ StarLab The Portable Planetarium

Take a trip to the stars! Learn to identify constellations.

StarLab requires a quiet indoor space large enough to accommodate its 11-foot height and 40-foot diameter.

Visiting hours

The Museum opens at 9:30 am for school groups, Monday through Friday and closes at 5:00 pm The Museum will be closed Mondays September 12 - December 19.

Admission fees

Groups save over 55% the general admission price. The school group rate is \$6/person for students, teachers, and chaperones. Two teachers per class admitted free with group. Receive an additional \$2 off admission per person when you sign up for a 50-, 90-, or 180-minute Focused Field Trip at the time of your reservation.

We accept school purchase orders, MasterCard, Visa, Discover and American Express, as well as personal checks and cash. Groups will be invoiced upon request. Individuals checking in and paying separately will be charged the full admission price, not the group rate. Members with membership cards should check in separately.

Call (919) 220-5429 x313 to make reservations

Monday through Friday, 8:00 am to 4:30 pm

48 hour advance notice is required to receive a group discount. Two week advance notice is required for facilitated Focused Field Trips.

Before calling, be sure you have:

- Specific date and time of arrival (alternate dates may be required).
- Full name, address, telephone number of the school, name of your school district, and names and email addresses of teachers in charge on the day of the visit.
- Grade level and number of students and adults.
- Name of the Focused Field Trip(s) for which you wish to register.
- Specific arrangements for groups with special needs or interests.

We will send you confirmation of your reservation, a map and further information to plan your field trip.

Adult chaperones are required for all groups.

We require a minimum of one adult for every eight (8) students visiting the Museum for Grades 3 through 8, and one adult for every five (5) students for Pre-K through Grade 2. Participation in the 180- Minute Focused Field Trip requires 6 adult chaperones/class.

Educators and chaperones must ensure that students:

- Stay with chaperones at all times, regardless of students' ages.
- Respect Museum staff, property, and other visitors.
- Understand that dangerous, disruptive, or destructive behavior will not be tolerated.

Groups are welcome to use the covered picnic dome and outdoor picnic tables next to the southside parking lot on a first-come, first-served basis.

Special needs

The Museum grounds (including train) are accessible to those with disabilities.

Ellerbe Creek Train

All aboard! Ride through the Museum's nature park on our beloved Ellerbe Creek Train. \$3 per person (students, teachers, chaperones) No reserved seats. Purchase tickets at the group check-in window or at the Admissions desk day of visit. Subject to availability.





**50-MINUTE
FOCUSED FIELD TRIPS**

\$180 + discounted group admission
\$195 for outdoor programs or programs with animals
+ discounted group admission
 Maximum group sizes: 25 students for ages 4-5
 30 students for grades K-8

**90-MINUTE
FOCUSED
FIELD TRIPS**

\$260 + discounted group admission
 Maximum group sizes: 30

**180-MINUTE
FOCUSED
FIELD TRIPS**

\$450 + free admission
 Maximum group size: 30
 All 180-minute Focused Field
 Trips include a 30-minute
 lunch-and-learn session.

Please bring your lunches
 with you to your program.

**50-MINUTE
PROGRAMS**

\$180 + travel fees
\$195 for program with animals
or StarLab + travel fees
 Maximum group sizes:
 25 students for ages 4-5
 30 students for grades K-8



AT THE MUSEUM

Sep 13 - May 26

Age 4 - Grade 1

Beneath Your Feet
 Incredible Insects
 Myself and Others
 Rain or Shine
 Super NanoScience
 Lilypad Pond

Grades 2-3

Butterfly Life
 Weather Watchers
 Movers and Shapers

Grades 4-5

Force and Motion
 Minerals Rock!
 Junior Meteorologists

Grades 5-7

Greenhouse Gases

Sep 13 - Nov 18
Mar 13 - May 26

Age 4 - Grade 1

Wind and Weather
 Bear's Backyard

Grades 2-3

Life in Wetlands

Grades 4-5

Animal Eyewitness

Sep 13 - Nov 18
Mar 13 - May 26

Grades 1-2

Essential Air

Grades 3-5

Forces of Flight



Sep 13 - May 26

Grades 2-5

All About Invertebrates
 Carolina Critters
 Lepidopterology

Grades 3-5

Dancing With the Stars

Sep 13 - Nov 18
Mar 13 - May 26

Grades 4-6

Animal Behavior
 Field Study

Grades 5-7

Sailboat Physics

Grades 5-8

Wetland Ecology
 Experience

Sep 13 - May 26

Grades 5-8

Rainforest Expedition



AT YOUR SCHOOL

Sep 13 - May 26

Age 4-Grade 1

Dinosaur Detectives
 Treasure Boxes
 Amazing Air
 Meet the Turtles
 Oh My Stars
 Midnight Movers

Grades 2-3

Sounds of Music

Grades 2-5

Starry, Starry Nights

Grades 3-5

Many Moons Ago

Grades 4-5

Circuit Builders
 Tropical Topics

**PROGRAMS AT
THE MUSEUM OR
AT YOUR SCHOOL**

SCIENCE NIGHTS

\$300 per hour onsite rental fee
\$195 per hour of programming
onsite or off

STAR LAB

\$195 + travel fees
 Maximum group size: 25



For All Ages
Live Animal
Program
 See page 7

Also available at the Museum

Self-Guided Field Trips

Wayfinders will direct you to the Museum exhibits most suited for your grade level, suggest activities, and provide questions to explore. Download them for free at lifeandscience.org/wayfinders

Field Kits are predesigned 20-minute lessons that come with materials and directions to enhance our exhibits in *Explore the Wild*. They're easy to tote and easy to implement!

Make every visit a meaningful learning experience.



FOSSIL IDENTIFICATION GUIDE

Use these photos to identify the fossil remains of ancient marine life you may uncover in the dig site.

Coel

Scapholi

Shark Teeth

Hammerhead Shark
Sphyrna tiburo

Tiger Shark
Galeocerdo cuvier

Megamouth Shark
Carcharodon megalodon

Small
Osteo

Longtooth Sandtiger Shark
Carcharias longirostris

Mako Shark
Isurus paucus

Sevengill Shark
Megachasma pelagios

Megamouth Shark
Carcharodon megalodon

Snuggletooth Shark
Megachasma pelagios