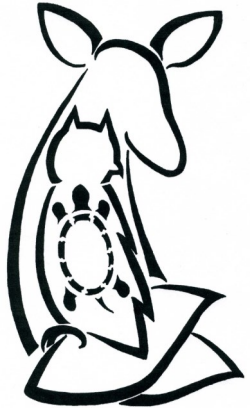


ENVIRONMENTAL
STUDIES CENTER

MOBILE COUNTY
PUBLIC SCHOOLS

MOBILE, AL



Desiree Bishop
Director

Susan Clement
Biologist

Tracy Delcambre
Resource Teacher

Troy Latham
Resource Teacher

Anita Salinas
Resource Teacher

Grace Phelps
Bookkeeper

Kody Wiggins
Grounds Keeper

Renee Perkins
Custodian



Mobile County
PUBLIC SCHOOLS



Wild Adventures

Volume VI, Issue II

Spring 2016

Critter Corner



Meet Diamond

There are 6 venomous snakes that are native to Alabama. These snakes are the water moccasin, the copperhead, the coral snake, the pygmy rattlesnake, the timber rattlesnake, and the Eastern diamondback rattlesnake. The Environmental Studies Center houses 5 of the 6 venomous snakes. The only venomous snake that is not on display is the coral snake.

The Eastern diamondback rattlesnake is the longest venomous snake found in North America. They can reach lengths of up to 8 feet. It gets its name from the diamond pattern that goes down its back. The main diet of the diamondback are rats and mice. Rattlesnakes are born without their rattle and each time they shed, a new segment is formed. The rattle is made of the same material as fingernails. The rattlesnake has fangs that are folded into the mouth. When the snake bites, venom is pushed through the hollow fangs.

The diamondback rattlesnake is housed in the classroom at the Center, so come by and see it and the other venomous snakes to learn how to identify them.

What's Happening at the Center

Swarms are in the Air!

Spring is here and it's time to talk about the birds and the bees! Well, just the bees actually. The Environmental Studies Center has been busy this season expanding its apiary by capturing swarms of bees from the existing hives. Some of you may have been fortunate enough (or unfortunate) to experience a swarm of your own. What is the reason behind these swarms and what should you do if you encounter one?

Indeed, if you have never experienced a honeybee swarm and all of a sudden find yourself in the midst of what seems to be thousands of bees swirling like a tornado in the air it can be quite intimidating. What you have experienced though, is one of nature's great wonders. A honeybee's natural instinct is to "go forth and multiply" and beekeepers try and prevent this swarming instinct to some degree. Even with the greatest care a beekeeper cannot calm the urge to swarm. Overcrowded hives and the constant need to reproduce is what drives the swarming behavior. Swarm season generally runs from March thru May but honeybees will swarm later in the summer if need be. Once the signal has been given inside the colony, the old queen and several thousand of her workers leave the hive and find a suitable place to "cluster" or "ball up" until scout bees find a new place for the queen and her followers to live. You may find a cluster in an undesirable place such as a tree in your front yard, the side of your house, or even the bumper of your car. Depending on where they are, though, you may want to call a beekeeper to come and remove them or you can leave them alone and they will be gone in a matter of just a few hours or a day or two. Whatever the case, when bees have swarmed and clustered this is when they are the most calm and least likely to sting since they no longer have anything to defend so try not to panic too much.

You may contact a beekeeper through the Mobile or Baldwin County Beekeepers Facebook page. Baldwin County beekeepers website is www.baldwinbees.com. You can also contact the Environmental Studies Center for questions as well.



We RECYCLE!!!!

Bring your aluminum cans to the ESC and we will recycle them!!!! We sell the aluminum and use the money to support the wildlife rehabilitation program at the ESC.

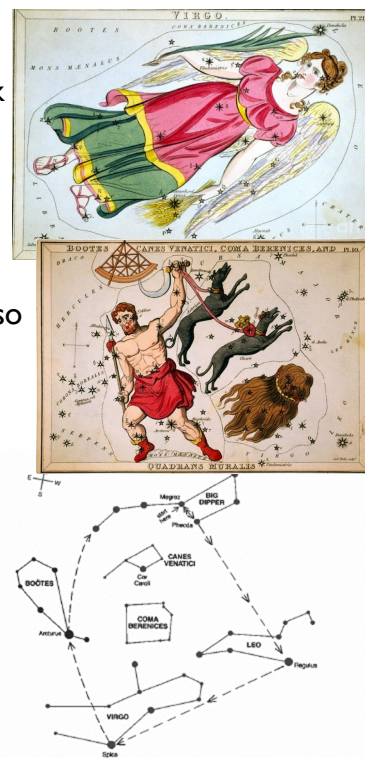


Two Damsels and a Herdsman

Throughout the spring and summer seasons, the constellation Boötes and his two hounds (Canes Venatici) can be seen along with Virgo and Berenice's Hair (Coma Berenices). The name Boötes comes from a Greek word which meant ox driver, plowman, or herdsman. Boötes and his hounds pursue the great bear (Ursa Major) as she circles around the North Star throughout the spring and summer season. The brightest star in Boötes is Arcturus which is among the brightest stars in our nighttime sky. Arcturus is a classic orange star which shines 113 times more brightly than our Sun, however, being 37 light years from Earth it does not appear so to us. Light years are used to measure the vast distances in space. At a distance of 37 light years away, the light we see tonight when looking at Arcturus actually left that star 37 years ago when I was four years old. One can easily use the big dipper which is part of Ursa Major to locate Arcturus. Simply follow the Arc of the handle to Arcturus as seen in the diagram.

Virgo, who represents Persephone – the daughter of Zeus and Demeter, is one of the signs of the zodiac. According to mythology, she was abducted by Hades and taken to the underworld. Her mother took revenge by ruining the harvests and the Earth became infertile. Zeus was forced to issue a decree that Persephone would only spend a short period of time each year in the underworld. Upon her release, Demeter permitted Nature to resume its natural course. We see Virgo holding an ear of corn throughout the spring and summer while we enjoy the growth of crops in our gardens. The brightest star in Virgo is the binary star known as Spica. Spica appears bluish in color and rests inside the ear of corn held by Virgo. Spica is 250 light years from Earth. After following the arc to Arcturus, spin on to reach Spica.

Nestled in the middle of Virgo, Leo, and Boötes is Coma Berenices or Berenice's Hair. Berenice was the wife of the Egyptian king Ptolemy III. While the king was away at war, Berenice offered her beautiful locks of hair as a sacrifice to Aphrodite for the safe return of the king. After returning safely, the king went to the temple to see Berenice's Hair, only to find that it had been stolen. That night an astronomer pointed out that the queen's hair had been transferred to the sky so that all humanity might admire them. Between Coma Berenices and Virgo there is a large open cluster of galaxies containing at least 2500 galaxies. Our local group of galaxies is moving toward this Virgo cluster of galaxies at a speed of 100-400 km/sec. Not to worry though, the Virgo cluster of galaxies is receding from us at a rate of ~1150 km/sec. These are just a few of the interesting things in our spring and summer night time skies.



Upcoming Events

May 7th 10:00 a.m. until 3:00 p.m.—Open House at the ESC

June 4th 1:00 p.m. until 5:00 p.m.—Rabies Clinic benefitting the wildlife rehabilitation program—Griggs Elementary School Front Parking Lot

June 6th—Summer Camps begin

Annual MCPSS Science Fair Winners

The annual Mobile County Public Schools Science Fair was held on February 19, 2016 at Clark-Shaw Magnet School. The overall winners are as follows:

Lisa Bramuchi-Faye Horizon Award for Most Promising 6th Grade Project

Kenneth Terrell
Hankins Middle School
Engineering
“When the Bulb Pops the Fire Stops”



Middle School Winner

Sophie MacDonald
Clark-Shaw Magnet School
Engineering
“Electric Waves”



High School Winner

Brooklyn Massey
Davidson High School
Environmental Science
“Effects of Hormones on Aquatic Life”



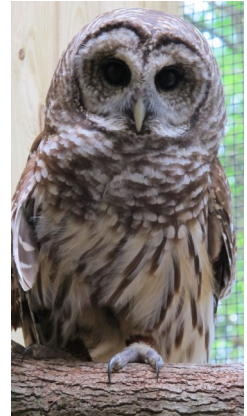
Overall Winner

Nolan Lenard
Davidson High School
Engineering
“Maximizing the Energy Output of Dye-sensitized Solar Cells”



Wildlife Wish List

Clip-on clamp lamp	Small frozen fish	Canned dog and cat food
Pine bark mulch	Pine shavings (for cages)	Dried whole corn
Cages	Baled hay	Frozen mixed vegetables
Heating pads	Scratch feed	Fresh fruits and vegetables
Liquid laundry soap	Bleach	Raw peanuts (in shell)
Liquid dishwasher soap	Wild birdseed	Nuts (in shell)
Wal-Mart gift cards	Newspaper	Dry dog food (small bites)
60-watt light bulbs	Plastic wrap	Unsalted sunflower seeds
Scrub brushes	Dawn dish soap	Canned sardines in water
Cash	B & B Pet Stop gift cards	

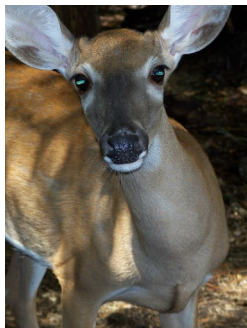


Wildlife Adoptions

For a \$25 annual donation you can help with the feeding, care, and shelter of one of the native wildlife housed here at the Environmental Studies Center. Not only can you adopt an animal for yourself but, you can give an adoption as a gift. Adoption benefits include: adoption certificate, photograph of your animal, fact sheet about the species, recognition of your adoption on the exhibit, and Environmental Studies Center e-Newsletter.

Complete the information below and mail it to the Center with your payment. Make checks payable to the Environmental Studies Center.

Animal Adoption



Name: _____

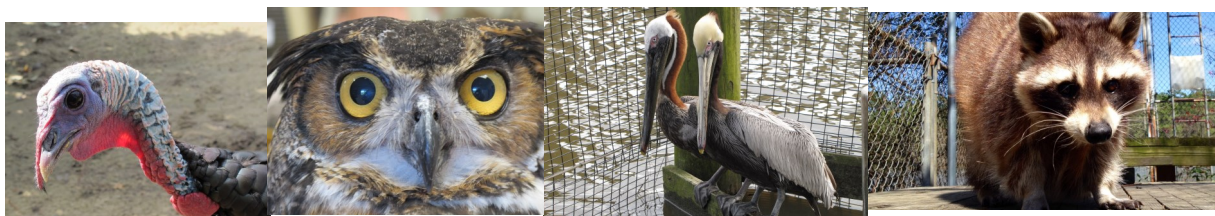
Address: _____

City: _____ State: _____

Zip Code: _____ Phone: _____

Email Address: _____

Please choose one: ☐ Raccoon ☐ Deer ☐ Pelican ☐ Seagull ☐ Alligator
☐ Mallard Duck ☐ Canada Goose ☐ Black Vulture ☐ Turkey ☐ Coyote
☐ Red-tailed Hawk ☐ Bald Eagle ☐ Wood Duck ☐ Turkey Vulture ☐ Screech Owl
☐ Barred Owl ☐ Great-Horned Owl ☐ Great Blue Heron ☐ Other: _____



Partners in Education



degussa.

*Dr. Louis Buckalew
& Family*



PVOC

Pleasant Valley Opportunity Club

Thoughts from the Director

DIRT: Does a body good!

With the arrival of spring flowers comes the pull to plant something in the dirt. I am not a great gardener, but there is something wonderful about planting a garden. Playing in the dirt once was a rite of childhood, but now many children never dig or plant anything in the ground. Here are just five ways (of many) that dirt can benefit your children.

Did you know that studies have shown dirt to be good for your brain? Apparently, there are types of bacteria that are naturally found in soil which activate the neurons that produce serotonin – a key chemical in many bodily functions, as well as a natural anti-depressant. In other words, dirt can actually help make you feel happy. Dirt is also great for the immune system, especially in children. Research has shown that early exposure to the naturally occurring microbes in soil will help build stronger, more disease-resistant kiddos. Without enough exposure to different bacteria and microbes, it is thought that the immune system doesn't learn to recognize its own cells, and this could be a reason for higher rates of asthma, eczema, and other diseases.

In our technologically savvy generation, kids just aren't getting enough time to play outside, this is called "nature-deficit disorder" and that has now been linked to attention disorders, depression, and obesity. Children who play outside laugh more, which means they're happy! It also means their blood pressure and stress levels are lower. We could all probably stand to laugh a little more! Kids who play outside grow in their character development: they become more adventurous, more self-motivated, and they are better able to understand and assess risk.

So this spring do yourself and your children a favor, go out and plant something in the dirt!!

Desiree Bishop, Director



Environmental Studies Center 2016 Summer Day Camp Program



Grades 1-2 "Nature and Me" 2 Day Camp \$80

Students will be guided through discovery investigations of the area's natural forest environment. The program will focus on living things and their habitats. Students will gain an appreciation for our natural resources while taking nature hikes, comparing physical features of animals, and participating in interactive games that will deepen their understanding of the forest.

Dates and Times:

2 Days June 15 – 16 8:30 a.m. - 4:00 p.m.

2 Days July 18 – 19 8:30 a.m. - 4:00 p.m.

Cost: \$80 per student (includes T-shirt)

Grades 1-2 "Art in Nature" 1 Day \$40

Students will discover the beauty, colors, and patterns in nature and will use what they experience to create original art projects.

Date and Time:

1 Day June 14 8:30 a.m. – 4:00 p.m.

Cost: \$40 per student (includes T-shirt)



Grades 2 – 6 "Wildlife Palooza" 1 Day \$40

Students will visit with native wildlife of the Mobile area. They will learn how these wonderful creatures survive in the wild and how these critters interact with each other. Also, they will develop an understanding of how each animal is beneficial to our environment and the people living in it. Activities include visiting the outdoor animal exhibits, viewing birds of prey up close, and a nature walk to look for signs of wildlife.

Date and Time:

1 Day June 6 8:30 a.m. – 4:00 p.m.

Cost: \$40 per student (includes T-shirt)

Grades 3-4 "The Secret Life of Trees" 1 Day \$40

Ever wonder what happens in the forest when no one is around to see? During this camp students will learn many secrets about the trees and forests including what creatures live among the trees, how some trees survive fire, and how to identify common trees in our area. Activities include nature walks, a scavenger hunt, and art activities.

Date and Time:

1 Day June 7 8:30 a.m. – 4:00 p.m.

Cost: \$40 per student (includes T-shirt)

Grades 5-6 "Feathers to Rockets" 4 (1/2) Days \$80

Come explore air travel with us as we investigate the "science" of FLIGHT. How do feathers help birds fly? How do airplanes fly? How do rockets go into space? We will discover these things together.

Dates and Times:

4 Days June 27-30 Afternoon Session Only
(12:30 - 4:30 p.m.)

Cost: \$80 per student (includes T-shirt and cost of field trip)



Grades 6-8 "WATER Activities" 1 Day \$40

W.A.T.E.R. (Watershed Activities Teaching Environmental Responsibility) will be a fun filled day of adventures that will explore our interactions and the effects we have on the Dog River Watershed. Students will collect and observe aquatic insects from Pine Lake, take water samples and measurements, build storm drain models, and discuss water safety to include kayaking on our 18 acre Pine Lake.

Date and Time:

1 Day June 21 8:30 a.m. – 4:00 p.m.

1 Day June 22 8:30 a.m. – 4:00 p.m.

Cost: \$40 per student (includes T-shirt)



Grades 3-4 "Let's Get Physical with Science" 2 Days \$80

Get your hands on unforgettable learning experiences and see how science can be truly amazing. Be a part of the wonder, discovery and exploration that is science. Students will learn the science behind the WOW! By taking part in inquiry-based activities that follow the scientific method, students will learn through exploration and strengthen their critical thinking skills.

Dates and Times:

2 Days July 20 - 21 8:30 a.m. - 4:00 p.m.

Cost: \$80 per student (includes T-shirt)



Grades 5-6 "Wonderful World of Nature" 4 (1/2) Days \$80

This camp is designed to combine outdoor recreation activities with environmental education experiences. Camp activities include trail hikes, fishing, saltwater aquarium presentations, and an 'up-close' look at the Center's wildlife collection. Participants will learn about the important plants of the forest and examine insect-eating plants in a pitcher plant bog.

Dates and Times:

4 Days June 27-30 Morning Session Only
(8:00 a.m. – 12:00 noon)

Cost: \$80 per student (includes T-shirt)



Grades 6-8 "Investigations in Microscopy" 1 Day \$40

Students will learn the basics of microscopy starting with the simplest magnifiers and ending with compound microscopes. Students will learn the parts of the microscope and develop the skills needed in microscopic investigation. The camp will involve hands-on activities that include observing patterns in nature, studying pond life, preparing slides, and using the compound light microscope and stereoscope.

Date and Time:

1 Day June 9 8:30 a.m. – 4:00 p.m.

Cost: \$40 per student (includes T-shirt)



Grades 3 – 6 "The Tale of the Butterfly" 1 Day \$40

Do you want to learn about the butterflies that live around you? If so, join the "Tale of the Butterfly" camp! Take a nature walk to view and identify these amazing bugs. Learn about their lifecycle. Create some neat butterfly crafts. This camp features fun activities that investigate the world of the butterfly.

Date and Time:

1 Day June 8 8:30 a.m. – 4:00 p.m.

Cost: \$40 per student (includes T-shirt)



For a registration form please see the reverse of this page.

2016 ESC Summer Camp Registration Form

Student's Name _____ Sex _____ School _____ Grade Level _____
 THIS FALL _____
 (School Year 16-17)

Address _____
 Street _____ City, State, Zip Code _____ email address _____

Phone # where parents can be reached during day _____
 Mother _____ Father _____ Other _____

Allergies/Special Needs _____

T-shirt Size: (Please Check) Child S (8-8) _____ Child M (10-12) _____ Child L (14-16) _____ Adult S _____ Adult M _____ Adult L _____

PLEASE CHECK APPROPRIATE SESSION BELOW *

Grades 1 & 2 Nature and Me
 2 Day \$80 per student (including T-shirt)
 June 15 & 16 8:30am-4:00pm _____ or
 July 18 & 19 8:30am-4:00pm _____

Grades 3 & 4 Let's Get Physical with Science
 2 Day \$80 per student (including T-shirt)
 July 20 - 21 8:30am - 4:00pm _____

Grades 2 - 6 Wildlife Palooza
 1 Day \$40 per student (including T-shirt)
 June 6 8:30am - 4:00pm _____

Grades 1 & 2 Art in Nature
 1 Day \$40 per student (including T-shirt)
 June 14 8:30am - 4:00pm _____

Grades 3 & 4 Secret Life of Trees
 1 Day \$40 per student (including T-shirt)
 June 7 8:30am - 4:00pm _____

Grades 5 - 8 Investigations in Microscopy
 1 Day \$40 per student (including T-shirt)
 June 9 8:30am - 4:00pm _____

Grades 5 & 6 Wonderful World of Nature
 4(1/2) Days \$80 per student (including T-shirt)
 June 27 - 30 8:00am - 12:00pm _____

Grades 5 & 6 Feathers to Rockets
 4(1/2) Days \$80 per student (including T-shirt)
 June 27 - 30 12:30pm - 4:30pm _____

Grades 3 - 6 The Tale of the Butterfly
 1 Day \$40 per student (including T-shirt)
 June 8 8:30am - 4:00pm _____

Grades 6 - 8 WATER Activities
 1 Day \$40 per student (including T-shirt)
 June 21 8:30 am - 4:00 pm _____ or
 June 22 8:30 am - 4:00 pm _____

*Lunch and 2 snacks will be provided for all day camps.
 **Students may bring their own lunch if preferred.

* Transportation is not provided. * PLEASE NOTE: MAKE CHECKS PAYABLE TO THE ENVIRONMENTAL STUDIES CENTER AND FORWARD WITH THIS FORM TO 6101 GIRBY ROAD, MOBILE, AL 36693. FOR ADDITIONAL INFORMATION, PLEASE CALL 221-5000.
 (Participants in all camps should wear appropriate clothing and shoes for outdoor activity. NO SANDALS or FLIP-FLOPS!)

(Please cut along dotted line and forward with payment to the Environmental Studies Center, 6101 Girby Road, Mobile, AL 36693)

The Mobile County Public School System
 Presents.....
**Summer 2016 at the
 Environmental Studies Center**

June 6—July 21



ppst.com

Rabies Clinic



Benefiting the Environmental
Studies Center's wildlife
rehabilitation program.

Saturday, June 4

1:00 – 5:00

at

W. C. Griggs

Elementary School

6001 Three Notch Road

\$9.00 per shot

For more information call: 221-5000

Recent Patients

American Woodcock: We received an American Woodcock in December with head trauma. It was believed to have flown into a window. After a week of rest and food it was able to be released.



Double-crested Cormorant: We received the cormorant in March and it presented with major head trauma. We believe it had been hit by a car. After a couple of weeks, it healed well and was able to be released back into the wild.

Cedar Waxwing: In February, we received this cedar waxwing with a broken wing. Unfortunately, it was such a bad break that it could not be released back into the wild. The waxwing is now housed in an exhibit in the classroom.



Little Blue Heron: The Little Blue Heron came to us in March with a broken wing. Unfortunately it did not survive. We believe that it had been hit by a car and had internal damage that could not be fixed.

Pied-billed Grebe: The Pied-billed grebe was found in the road and brought to the Center in February. It was scraped on the feet from the pavement but otherwise fine. Grebes are made for diving and cannot walk on land because of the placement of their legs. It was believed that it mistook the wet road for water and landed on it accidentally and then became stuck. After some rest and food we were able to release the grebe on our lake.



U.S. Fish & Wildlife Service

Migratory Bird Treaty Centennial 1916-2016

100 Years of Migratory Bird Conservation

Conserving today's birds for tomorrow



Why Celebrate the Migratory Bird Treaty?

The year 2016 marks the centennial of the Convention between the United States and Great Britain (for Canada) for the Protection of Migratory Birds (also called the Migratory Bird Treaty), signed on Aug. 16, 1916. The Migratory Bird Treaty, and three others that followed, form the cornerstones of our efforts to conserve birds that migrate across international borders.

The Treaty connects the U.S. Fish & Wildlife Service with our federal, state, private, non-governmental, tribal, and international partners, who share a long, successful history of conserving, protecting, and managing migratory bird populations and their habitats. Celebrating the centennial of the first Treaty allows us to bring together those who have contributed to its success, and to galvanize efforts to protect migratory birds for the generations to come.



Migratory birds

- ...connect people with nature and add beauty, sound and color to our world. They provide countless opportunities for enjoyment by birders, hunters, and outdoor enthusiasts and have cultural and spiritual importance.
- ...contribute environmental benefits, including pollination, insect and rodent control, and seed dispersal.
- ...are good indicators of environmental health because they are so visible and relatively easy to study. Studying birds can give us a picture of what is going on in the world.
- ...play a key role in the U.S. economy, supporting recreational opportunities that create jobs and generate billions of dollars in revenue.

Goals and Objectives

Create awareness about the importance of migratory bird conservation

- Encourage stories in news media about Treaty achievements, migratory birds, and habitat conservation
- Connect people to migratory bird conservation via social media

Promote key actions to help conserve birds

- Increase participation in citizen science programs
- Expand property/homeowner use of best practices (lights out, reduce collisions, wildlife-friendly gardens)

Increase support for migratory bird conservation programs and initiatives

- Strengthen international partnerships
- Increase knowledge and understanding of key legislation

Our Goal

Create awareness, promote key actions, increase support, and expand opportunities for engagement in the conservation of migratory birds

Expand opportunities for engagement in bird watching, hunting, and conservation

- Support bird-focused programs and festivals in Urban Bird Treaty Cities and Urban Refuge Partnerships
- Increase participation in Duck Stamp and Jr. Duck Stamp
- Promote youth birding and hunting events at National Wildlife Refuges

Next Steps

Throughout 2016 the Service will work with partners to create awareness, promote actions, increase support, and expand engagement in the conservation of migratory birds.

A national strategy provides a framework for working together to achieve mutual goals and objectives. This centennial celebration is a big one, and we hope your organization will join us. We need your input, ideas, and commitment to participate.

Help shape and lead this effort to celebrate the legacy of the Migratory Bird Treaty. Together we can inspire the next 100 years of international collaboration for bird conservation.

Contact us to learn more and get involved:

Email: MBTreaty100@fws.gov
Web: <http://fws.gov/birds/MBTreaty100>

January 2016



**ENVIRONMENTAL
STUDIES CENTER**

**MOBILE COUNTY
PUBLIC SCHOOLS**

MOBILE, AL

**6101 Girby Road
Mobile, Alabama
36693**

**Phone: 251-221-5000
Fax: 251-221-5002**

**Open 8:00a.m.-4:30p.m.
Monday—Friday**

**Individual Admission:
Free
\$2 Donation appreciated**

**Group tours:
Reservations required
Contact 251.221.5000
for pricing information**

Non-profit organization



Wild Adventures

The Environmental Studies Center is a natural sciences education facility designed to provide unique learning experiences. In addition, wildlife rehabilitation plays a vital role each day here at the Center. With over 500 acres of rich woodlands, the Center affords teachers, students, and the general public an opportunity to experience firsthand the natural environment. Natural resources include pine and bay forests, swamps, freshwater streams, carnivorous plant bog, and a twenty-acre lake.

Man-made resources include numerous nature trails, covered pavilions, live animal exhibits, butterfly garden, and native plant garden. Indoor facilities include an auditorium, gift shop, and classroom containing live reptile exhibits, a saltwater aquarium, and numerous preserved specimens native to Alabama.



The Environmental Studies Center houses a wildlife rehabilitation program that is dedicated to the care and potential release of injured and orphaned native wildlife. The wildlife rehabilitation program receives around 800 wild patients a year. These animals all need food, care, and shelter to survive. The program relies upon donations from people like you for its operation and success.

**Environmental Studies Center
6101 Girby Road
Mobile, Alabama 36693**