



Explore Natural Volusia

All Programs – All Locations

BOTANY

Botany, also called plant science or plant biology, is the science of plant life and a branch of biology.

Ethnobotany

Earthy edibles

Ever wondered what plants are edible and which should be avoided? Come join us on this exploratory hike into the preserve to investigate what plants are edible, their historical uses and how these plants can be incorporated into your landscaping. This program is free.

Edible and Medicinal Plants

Learn how humans have historically used the native plants growing in our area, and their importance to wildlife. Participants will learn how to identify useful native plants, learn where they grow, and how they have been used throughout history.

Edible Florida

Don Philpott, instructor with University of Florida's Florida Master Naturalist program, a Certified Interpretive Guide and member of the National Association for Interpretation takes you on a classroom exploration of some of the 1,700 plants in Central Florida that have culinary or medicinal uses. Foraging food for free can be fun if you want to add some interesting ingredients to your meals or need a trail-side snack. It is different from foraging in an emergency when your ability to find food could save your life. This program discusses basic foraging tips and looks at many of the plants that can be used, including many that will

Medicinal plant walk

Join us for a guided interpretive hike discussing the traditional medicinal uses of plant species found in Scrub habitat at Lyonia Preserve. Participants should wear closed-toe shoes and hats and bring water and bug spray. The fee is \$3 per person.

Exotic Plants

Air Potato Round-up

Learn about the hazards of the exotic, invasive air potato plant and do a hand removal of the bulbs. Participants will understand the hazards of exotic, invasive, plants, the value of native plants, and learn how to remove air potato from their yards.

Bark—Unique Prints of a Tree

An introduction to different habitats and the species of trees that live in each, focusing on the bark adaptations of each plant to its habitat. Participants will examine sand hill, mesic hardwood forest, and sand pine scrub, and compare and contrast the differences of each habitat. We will also discuss the importance and procedure of prescribed fire and how burning affects different habitats. We will observe the differences in bark and leaves between

Invasive Non-Native Plant Hike

An introduction to invasive non-native plants and the damage they cause to the natural lands.

Participants will go on a hike and examine and identify invasive non-native plants. We will discuss problems caused by invasive non-native plants and how land managers control invasive non-native plants, including the importance and procedure of prescribed fire.

Pepper Busting

Learn about the hazards of the exotic, invasive Brazilian pepper plant and do a hand removal of the trees. Participants will understand the hazards of exotic, invasive, plants, the value of native plants, and learn how to remove Brazilian pepper from their yards.

Russian Thistle Dismissal

Learn about the hazards of the exotic, invasive Russian thistle plant and do a hand removal of the shrubs. Participants will understand the hazards of exotic and invasive plants, the value of native plants, and learn how to remove Russian thistle plants.

Sensational shamrocks!

It's almost St. Patrick's Day! Come dressed in your favorite green clothing and learn about the history behind this interesting plant during this indoor program. Afterwards stay to create some clever clover crafts to take home with you. This program is free.

Grasses

Grasses and Their Look-Alikes

An introduction to grasses, rushes, and sedges and how to identify them. Participants will go on a hike to see grasses, rushes, and sedges growing in wetlands. We will compare and contrast and identify grasses, rushes, and sedges and discuss procedure and importance of prescribed fire for grasses.

Plant Adaptations

Bees and Other Pollinators

An introduction to pollinators, especially honeybees. Participants will explore the roles of pollinators in the upland and wetland habitats. We will discover the importance of pollinators and examine the biology, ecology, and ethnology of honeybees. We will also discuss threats to pollinators and discover ways to protect and provide habitat for native

Flower Anatomy

Flowers are how plants produce seeds in order to reproduce. Join LEC education staff in our classroom where participants will learn the different parts of flowers and how flowers help plants reproduce. This program is recommended for children ages 8-13. This program is free.

Leaf exploration

Unravel the magic of leaf structure and photosynthesis! During this classroom workshop you will learn the anatomy of a leaf and how plants make food. There will be multiple specimens on hand to explore and examine more closely. Participants will make a leaf rubbing to take home with you. This program is free and recommended for children ages 6-12.

Leaves-Fingerprints of a Plant

An introduction to leaves and characteristics that make them unique. Participants will name leaf parts and characteristics. We will differentiate between types of leaves, categorize leaves based on type and characteristics and discuss leaf presses and examine pressed leaves from plants found on the lands.

Moss Mania: Exploring the Lichens of Lyonia Preserve

Reindeer moss, British Soldier moss... lichens have such fabulous common names! During this indoor classroom workshop, LEC staff will teach you which ones can be found in our preserve. Afterwards, we will take a short hike to look for, and collect, a few species to take back to the classroom and examine under the microscopes. This program is free.

Peculiar Plants

Students will learn to identify plants found in scrub habitat and how their adaptations help them survive in a hot, dry environment.

Pollinator Garden Planting

Learn about the value of pollinators and then do site preparation and planting of pollinator plants in a garden. Participants will learn about soils, planting techniques, pollinators, plants attractive to pollinators, tool safety, and how to plant a pollinator garden.

Prickly Pear—Cactus of the Florida Desert

An introduction to the prickly pear cactus. Participants will compare the cactus to leafy plants and discuss cactus adaptations and how they enable it to survive on the lands. We will use dissecting and magnification tools to examine cactus parts and discuss the procedure and importance of prescribed fire for the prickly pear cactus.

Seeds

Seed Scavenger Hunt

An introduction to fruits and seeds and how they spread. Participants will collect seeds and fruits from different habitats on site and examine and dissect specimens. We will name the parts of the fruits and seeds, discover the different adaptations of fruits and seeds and discuss the procedure and importance of prescribed fire in seed dispersal and germination.

So Many Seeds

Scouts will examine seeds and learn how they travel during this classroom workshop. Scouts will learn how seed dispersal affects our environment and what flowers, plants and animals depend upon this process. Following the workshop, participants will make one of their very own seeds to take home.

Strategic Seeds

Students will gain a greater understanding of seed dispersal in plants and the adaptations plants and their seeds have to enable them to increase the distance that they can travel to establish themselves. Participants will create and test their own version of a seed following the discussion. This is an indoor activity.

Traveling Seeds

An introduction to how seeds disperse from their parent plant to their germination destinations. Participants will collect seed specimens from various habitats on site, use magnification tools to examine seeds, and discover adaptations of seeds enabling them to spread. We will also discuss the procedure and importance of prescribed fire for seed dispersal and germination.

Trees of Volusia County

Forester Badge Program

Scouts will participate in a guided hike into the preserve to learn about tree species indigenous to scrub habitat and those that are non-indigenous. LEC staff will focus on how animals use these trees and their importance to our environment. Included in this discussion will be the importance of prescribed burns in maintaining scrub habitat. After the hike, LEC staff will lead scouts on a tour of the LEC exhibit gallery where the focus will be on “Overgrown Scrub” and the methods officials use to prevent overgrowth.

Oaks in depth

Learn how to identify the different oak trees that inhabit the scrub and the important role they serve in the scrub ecosystem on this guided hike through Lyonia Preserve.

Wildflowers

Flower Power

An introduction to flowers and plant reproduction. Participants will use dissecting and magnifying equipment to observe and dissect native upland and wetland flowers, then examine the parts of a flower and their purpose. We will discuss the interrelationship between plants and pollinators and the procedure and importance of prescribed fire for blooming plants.

Flower Power Pollination Party

An introduction to flowers and their role in plant reproduction and the interrelationships of flowers and their pollinators on the lands. Participants will learn the importance of pollinators and how they affect the natural lands. We will use the scientific method to set up and carry out a monitoring experiment. We will also discover which pollinators visit the native flowers on the program site and discuss the procedure and importance of prescribed fire in maintaining flowering plant growth.

Gardner

Scouts will spend time in the LEC's butterfly garden and preserve on a 1 hour hike where they will learn what every plant needs to survive. Participants will also explore plants native to Florida. Scouts will also learn how they can create a backyard garden during a 1 hour classroom lab making recycled potted plants and making a backyard bird feeder to take home.

Looking for Lupine

Lyonia Preserve is home to this beautiful "rare" plant species. Environmental Specialists will lead this exploratory hike in search of this showy plant as well as some of the other native species it shares its habitat with. This program is free.

The Wonder of Flowers

An introduction to flowers and their role in plant life. Participants will examine forms, colors and shapes of flowers and discover how the differences among flowers enable different plants to survive. We will discuss pollination techniques among different plants, compare and contrast upland and wetland flowers and discuss the procedure and importance of prescribed fire in maintaining flower habitat.

Wildflowers of the fall

An introduction to native fall wildflowers of Volusia County. Participants will discover flowering plant biology and discuss the procedure and importance of prescribed fire for wildflowers. We will then go on a hike through upland and wetland habitats to observe and identify flowering plants.

Wildflowers of the Fall Eco-Buggy Tour

An introduction to fall-flowering grasses and wildflowers of Volusia County on an Eco-Buggy through conservation lands. Participants will observe fall-flowering upland and wetland plants in bloom and tour wetland and upland habitats and examine the characteristics that determine their flora. We will then examine flowers with hand lenses to see part and discuss the importance of fire for many plants to bloom and produce viable seeds.

EARTH SCIENCE

Earth science or Geoscience is an all-embracing term for the sciences related to the planet Earth.

Astronomy

Discover the night sky

Join Ed Williams for a short classroom presentation on Astronomy, followed by the unveiling of LEC's

new Dobsonian telescope. Help us put it into action for some sky gazing! Some objects we hope to see will be the Orion constellation, Orion nebula, Pleiades, Jupiter and the moon. Bring your curiosity and dress for the weather! This program is free.

Night Sky Star Tour

Observation of the night sky and discussion of its effects on wildlife. Participants will discuss and observe light pollution and its effects on night wildlife and discover how the night sky is used for navigation by wildlife and the circadian and lunar cycles and how they affect flora and fauna. We will then discuss the effects of the Moon on water, including the tides and explore the geography of the night sky while observing the night sky.

Star Party

To celebrate the season's celestial wonders, Seth Mayo, Curator of Astronomy at the Museum of Arts and Sciences in Daytona Beach, will be hosting a star party event at Beck Ranch Park in Deltona. Weather permitting, you will have the opportunity to learn about the famous constellations, nebula, star clusters, and many other objects that will be visible. The viewing will also be enhanced by the use of a telescope that will be setup and used throughout the evening. Please dress warmly, and you are welcome to bring your personal binoculars for your enjoyment. This program is free and due to the nature of this program registration is limited to 20 participants.

Star Tour - The Moon and More

Introduction to the night sky and the Moon, and the effects of each upon the natural lands. Participants will discover the effects of the Moon on the Earth, as well as the effects of the Earth on the Moon. We will discover the uniqueness of the Earth's Moon and discuss and observe light pollution and its effects on night wildlife. We will discover how the Moon and stars are used for navigation by wildlife, discover the circadian and lunar cycles and how they affect flora and fauna and discuss the effects of the Moon on water, including the tides. We will also observe the Moon, constellations and planets.

Telescope Workshop and Star Tour

Introduction to telescopes, and to night sky and its effects on the natural lands. Participants will discover how to use a telescope, explore the geography of the night sky, and discover dos and don'ts of telescopes. We will discuss and observe light pollution and its effects on night wildlife and discover how the night sky is used for navigation by wildlife, the circadian and lunar cycles and how they affect flora and fauna. We will observe the Moon, constellations and planets.

Telescope Workshop for Beginners

An introduction to telescopes and how to use them. Participants will discover how to use a telescope, explore the geography of the night sky, and discover dos and don'ts of telescopes.

Ecosystems

Wonders of the Winter Solstice

Come celebrate the shortest day of the year with us! Join LEC staff during this indoor presentation as we explore the winter solstice, Florida's seasons and the sun's effects on ecosystems. We will also explore how this event is celebrated in other parts of the country. This program is free.

Geology of Volusia County

Make your own Fossil Workshop

Rocks and fossils help to tell stories about Earth's history. Join LEC staff during this indoor workshop where we teach you how to make your very own fossil to take home with you. This program is recommended for children ages 7 and up. This program is free.

Plants and Animals in the wild

Understanding Circadian Rhythms

It's almost daylight savings time again! During this classroom presentation, LEC staff will explain how "internal clocks" help animals, plants and other life adapt to daily living activities. This program is free.

Soils of Volusia County

Science and Art of Soils

Comparison of soil characteristics between wetland and upland habitats and the factors that affect them. Participants will use pedological tools to dig a soil profile and use a soil-color book to analyze the soil horizons. Then examine and discuss the interrelationships between the water table, rainfall, and soil. We will also discuss the importance and procedure of prescribed fire.

The foundation of the garden - soil

Join Ed Williams, Master Gardener and Beekeeper in the LEC classroom for this presentation. Learn the basics... what soil is, how to amend, composting, vermicomposting, solarizing, fertilizing and soil testing. New gardeners and gardeners new to Florida will find this presentation especially helpful. This program is free.

ECOLOGY

Ecology is the scientific study of interactions among organisms and their environment.

Aquatic Ecosystems

Coastal Ecosystems Flora and Fauna

An introduction to the coastal environment-soils, water, and native organisms. Participants will go on a hike and explore the coastal environment and discuss the various components of the coastal ecosystem and the importance and procedure of prescribed fire.

Ecosystems

A guided tour in a centers approach around the MSC. Participants will be introduced to the natural environment around the Marine Science Center.

Estuaries

Learn about the importance of estuaries, oceans, fish and other aquatic species, marine mammals, and the hazards of marine debris. Learn why estuaries are called the "cradle of the ocean", the importance of mangroves, oysters, how marine mammals utilize the environment, and marine debris hazards.

Estuaries - Adopt-An-Estuary

Students do hands-on activities that teach them about manatees, marine mammals, estuaries, springs and re-charge areas. Students learn about estuaries and springs, and their importance to manatees, marine mammals and the health of our aquatic environment.

Estuary Seine Netting

This class explores both the Marine Science Center exhibits and Estuaries in the Lighthouse Point Park. Get an up close look at the Marine Science Center exhibits and explanation of how ecosystems work. Tour the Lighthouse Point Park where students learn how to use a seine net to catch, ID, and release creatures back to the estuary without harm to them.

Waterbody Paddle

Explore various waterways, shorelines and the associated flora and fauna. Introduction to the factors that affect water quality and quantity. Participants will paddle down the St. John's River and Blue Springs to discover hydrology of water bodies and surrounding lands, discover effects of natural lands on

water quality, and observe aquatic and shoreline flora and fauna. We will also explore the littoral zone.

Wetland Hike

Introduction to wetlands and their flora and fauna. Participants will go on a hike and collect specimens of wetland flora and fauna, explore different types of wetland habitats, compare and contrast different wetland habitats, and observe and identify aquatic macro invertebrates. We will also discuss wetland ecology.

Decomposition

Dead Log Condos

Introduction to the process of tree decomposition and the carbon cycle. Students will discuss the importance of dead tree decomposition for the lands, esp. in the provision of habitats and returning nutrients to the earth, discuss the procedure and importance of prescribed fire in the nutrient cycle, and use magnifying tools. We will also examine dead logs and the organisms that live in them.

Eco Walk

Eco Walk

An Exploration of Lighthouse Point Park. Learn why this area is environmentally fragile and unique. We will walk along the jetty and through the dune system and boardwalk to learn about Gopher Tortoises.

In the Land of Milk and Cheese

Scouts will have an opportunity to enjoy all the wonders of nature and expand their knowledge of textures during this two part program. The first part of the program LEC staff will discuss with scouts different textures that can be found in nature. Afterwards, staff will lead a guided hike where participants can find as many textures in nature as they can and draw what they find.

The Tiger Adventure Program

This workshop will focus on the following badge: "Let's Go Outdoors". Scouts will be taken on a 1 hour guided hike, observe and record the weather, and make their very own leaf rubbing to take home.

When the Flowers meet the Trees

Included in this program, LEC staff will lead scouts on a guided hike into the preserve where they will make tree bark rubbings. Afterwards staff will discuss with scouts the differences in patterns and textures of different trees.

Fire Ecology

Fire Ecology

Introduction to the importance of fire to maintain habitat health.

Fire in the Scrub

Join Environmental Specialist Danielle Ivey on this guided hike to learn about the importance of fire in maintaining the Florida scrub. Learn how plants have adapted to fire and how animals rely on fire-maintained ecosystems. This program is free.

Fire in the scrub hike

Join Environmental Specialist Danielle Ivey on this guided hike to learn about the importance of fire in maintaining the Florida scrub. Learn how plants have adapted to fire and how animals rely on fire-maintained ecosystems. This program is free.

Land Management

GLOBE Biometry

Introduction to measuring land cover. Participants will use scientific protocol and equipment and set up 30m x 30m study site and measure trees and ground cover using various methods and tools.

Nature Study

April showers bring May flowers

Spring has arrived and pollination is in action within Lyonia Preserve. Bring your family to the join us on an exploratory hike to see what flowers may be in bloom this time of year. Please bring water, wear closed toed shoes and be prepared to hike on unpaved sugar sand trails. This program is free.

Cavity nesting in the scrub

When we think of animals nesting, we think of a bird's nest made of sticks and branches. However, participants will explore with LEC staff another kind of nesting that does not involve the hard work of configuring a nest. During this indoor presentation you will learn what cavity nesting is and what animals within the scrub use these unique structure as a home. This program is free.

Fall Foliage

It may seem that the only colors you see out in our preserve are green and brown, but there is fall in the scrub. LEC staff will lead an exploratory hike into the preserve to discuss the many different plants that bloom this time of year. This program is free.

Milkweed mania

Learn how the survival of the monarch butterfly is dependent on this beautiful flowering plant. Make a milkweed seedling pot to take home and plant to help this species survive. Participants will be entered into a drawing to win a full size milkweed plant. This free program is suitable for all ages.

Nature Study

During this program Scouts will learn what plants are important to animals and why. Scouts will learn about a plant that is protected in our state and why it is protected. Education staff will lead Scouts on a guided hike where they will teach them how to identify many different species of birds. During this hike they will also learn about a particular animal that is protected in our state. After the hike, they will return to our classroom and learn how to construct a butterfly hand rearing cage and how to rear an insect from egg to chrysalis.

Plant Exploration

LEC staff will guide participants on an exploratory hike into Ponce Preserve Park, Ponce Inlet. Everything from Blanket flower to Prickly pear cactus inhabits this area. Who knows we may even spot a Gopher tortoise! Please meet LEC staff approximately 10 minutes prior to start of program at the entrance to Ponce Preserve Park 4401 Peninsula Drive, Ponce Inlet. It is recommended participants bring bug spray, sunscreen and water to enjoy this adventure! This program is free.

Poisonous vs. Venomous Hike in Lyonia Preserve

Do you know the difference between poisonous and venomous? Join LEC staff on this guided hike in Lyonia Preserve where we will discuss the differences and learn about venomous and poisonous plants and animals that could possibly be found here. Participants should bring water, wear closed toed shoes and be prepared to hike on unpaved sugar sand trails. This program is free.

Pollination in action

What is pollination and who are pollinators? Join LEC staff on this exploratory hike to learn what pollinators are out and about during this time of year in the preserve.

Plant Communities

Animal Habitats

Scouts will investigate different habitats and the animals that call them home during a 1 hour hike in Lyonia Preserve. Your group will also learn different ways they can help save endangered species and the habitats they live in during a 30 minute classroom workshop where they can make a manatee craft to take home and finish with a 30 minute exhibit gallery tour.

Habitat Scavenger Hunt

Introduction to 'habitat.' Participants will explore the meaning of 'habitat' and its importance to all organisms, go on hike to observe site habitats, and identify and check habitat characteristics off of provided list.

Neighborhoods of Plants

Introduction to the flora, fauna and structure of natural communities and the mechanisms that affect them. Participants will go on a hike to explore different upland and wetland plant communities and discuss why different areas have different plant communities. We will also dig a soil profile in an upland and a wetland habitat and compare characteristics and discuss the land management of different plant communities, including the importance and procedure of prescribed fire and discuss what environmental variables affect plant

Plant exploration

Join staff of the LEC for this guided exploration of part of a local park. Learn about the many different plant species that can be found within the park and springs. Be sure to bring your camera so you can capture images of the flora and fauna found around the park's "delicate green waters". This program is free.

Scrub Habitat

Scrub Habitat 101

This is an introductory hike on scrub habitat. Students will learn the basics of scrub habitat-what it is, why it is important and about the plants and animals that depend on it for survival.

Scrub stroll

This is a wonderful time to explore the flora and fauna of Lyonia Preserve. The preserve comes alive, and you never know what you might see! Join us on a naturalist guided hike to discover all that the preserve has to offer.

Sunset over the LEC

Many animals found in Lyonia Preserve are "crepuscular"; meaning they are more active at dawn and dusk! Join LEC staff on an exploratory hike in the preserve during the dusk hours to see who's out and about! Participants are strongly suggested to bring a flashlight along for this exploration.

Upland Ecosystems

Feeders & Foodies

Students will learn about who eats who in the Scrub habitat and trace the energy flow from one organism to the next in this activity. Students will understand that there are many food chains in the scrub habitat that can all be interconnected to form a large web of feeders (predators) and foodies (prey)! This is an outdoor activity.

Gallery Scavenger Hunt

Students will explore the LEC exhibit gallery as they search for answers to clues relating to scrub habitat, the aquifer, water conservation, manatees, Florida scrub jays and other wildlife found in Lyonia Preserve. This is an indoor activity.

How many live here?

Students will be using quadrats to study the biodiversity of two different areas in Lyonia preserve (an area that has recently been managed, and one that has not), while comparing and contrasting the differences in biodiversity between the two. This is a hands-on, outdoor, investigational activity.

S.O.S. (Save our Scrub)

What is scrub? Who lives there & why is scrub important? These questions and more will be answered as students work in teams in this hands-on activity where they will act as land developers. Participants will learn about building “green” and preserving endangered species and their important habitats as humans and wildlife try to share environments. This is an outdoor activity.

Scrub Jeopardy

Students will learn about scrub habitat and other environmental issues while working in teams to play this fun, interactive game. Different versions are provided based on grade level. This is an indoor activity.

Wetland Ecosystems

Ephemeral wetland hike

What is an ephemeral wetland? Join us on this exploratory hike of our preserve to investigate which plant and animal species are dependent upon this intermittent body of water within the preserve. Depending on conditions, participants’ feet may get a little wet and mucky...so appropriate footwear is a must! This program is free.

Wetland walk

Lyonia Preserve is home to two ephemeral wetlands, which are a unique ecosystems within the scrub habitat. Join educators on a guided hike to visit one of these wetlands, and learn why they are so important. This program will include time for dip-netting for critters living in the wetland (weather permitting), so participants are asked to wear closed toe shoes and long pants that they do not mind getting wet and/or muddy.

ENVIRONMENTAL MANAGEMENT

Environmental resource management is the management of the interaction and impact of human societies on the environment.

Endangered, Threatened or Vulnerable

Conservation Status

A guided tour of the Marine Science Center and their conservation lands.

Environmental Policy

This is Jeopardy!

Join the LEC education staff in our classroom for a family fun game of Jeopardy. Test your knowledge on a variety of environmental subjects. This program is free.

Gopher Tracker

Gopher Tracker

An online educational presentation to familiarize the public with the Gopher tortoise. Information covered includes habitat, diet, reproduction, and how to identify a Gopher tortoise and their burrows. Obtain knowledge to help identify Gopher tortoises, and their burrows, for the Volusia County Gopher Tracker Volunteer Program. Sightings can be reported using the Gopher Tortoise Sighting Report, available at www.gophertracker.org, by clicking on the Sighting Report link.

Habitat Conservation Plan

Beach Habitat Conservation Plan (for the public)

This 1 hour power point presentation covers the history of the County's beach driving permit, the protected wildlife species found along our beaches and what programs are in place to protect them and their habitat. It also summarizes how effective the plan has worked over time and explains seasonal changes to beach management and operations.

Habitat Conservation Plan (HCP) Training

This is a required training course for all County employees, contracted employees and concessionaires driving on the beach for work purposes including early, late and closed area access responsibilities. The presentation covers basics about the County's beach driving permit and how to drive responsibly on the beach without harming the environment. It covers many facets of the HCP. This is a Power Point presentation which takes approximately one hour to complete. A signed acknowledgement form will be required upon completion. It will be held on file until the training period expires. (1-5 years, based on driver category per the HCP).

Nighttime Operations Training

This is specifically designed for Volusia County Beach Safety staff and other law enforcement agencies and departments who may conduct patrols and respond to calls with vehicles on the beach at night. This is a 30 minute power point presentation.

Nighttime Operations with furniture pick-up training

This is specifically designed for Volusia County Beach Safety staff and contractor trash removal employees who may conduct vehicle patrols and respond to complaints to remove beach equipment and furniture left on the beach at night. This is a 30 minute power point.

Rut raking training

This is a required class for contractors and staff elected to conduct rut removal operations in front of sea turtle nests due to hatch each summer. The 1 hour power point presentation covers the HCP rut removal operations guidelines of how to properly check nests and remove ruts. A field exercise using actual equipment may also be conducted based on the experience of the attendees. This training is required annually per the HCP.

Washback Training

This class is required to be completed annually by Beach Safety staff who drive on the beach (not tower guards) and ramp grading equipment operators who are required to conduct washback surveys when fresh seaweed is deposited on the beach (Aug-Nov). It is an approximately 1 hour power point presentation which covers the FWC issued Letter of Consent for this activity and all of the requirements on how to conduct, handle, hold, and transport washback sea turtles in accordance with the HCP and ramp grading permit.

Land Management

Bike Hike

Introduction to the trails and habitats of conservation lands. Participants will bike through the site, examine flora and fauna and its hydrologic features.

Eco-Buggy Tours of Conservation Lands

Introduction to the natural and cultural history and current land management practices on Volusia County Conservation Lands. Participants will ride eco-buggy through upland and wetland habitats and discuss land management practices and goals of the site and forestry practices on site. We will observe and discuss soils, hydrology, flora and fauna of site and the importance and procedure of prescribed fire.

Ecosystem Reconnaissance

Introduction to sampling and measurement methods used by ecologists, pedologists, botanists, and meteorologists. Introduction to orienteering. Students will orient themselves using an aerial map and compass and take various measurements in three different habitats on the site: sand hill, mesic hardwood hammock, and sand pine scrub. Then we will discuss the importance and procedure of prescribed fire in maintaining habitats and use various tools to take measurements and record data.

Guided Hike

Introduction to the trails and habitats of conservation lands. Participants will go on a hike through upland and wetland habitats on site and examine the hydrology of the site and its soils. We will discover the flora and fauna of the site and discuss the procedure and importance of prescribed fire.

Swamp Buggy Forestry and Land Management Tour

Introduction to the natural and cultural history and current land management practices on Volusia County Conservation Lands. Participants will discover land management forestry and timbering goals in restoration projects on site. We will discover techniques and equipment of foresters, discuss pine tree species and pine trees as a resource. We will observe and discuss soils, hydrology, flora and fauna of Lake George WMA and the importance and procedure of prescribed fire.

Talk to the Trees

Introduction to forestry. Students will explore how trees contribute to the health of a forest habitat. We will discuss the importance of trees as a resource, work of foresters and discuss the importance and procedure of prescribed fire.

Manatee Protection Plan

Manatees - Adult Training

Two hour training on how to be a Manatee Watcher, covering manatee physiology, behavior, habitats, and threats. Participants learn basic manatee physiology, behavior, habitats, protective laws, and threats to their existence.

Sea Turtle Lighting

Sea Turtle Lighting 101

This is a power point presentation which explains the problem lighting causes to sea turtles, the County lighting ordinance, and shows specific ways of how to comply with the ordinance and use sea turtle friendly options. Approx. 45 minutes

Sea Turtles

Washback Watchers Volunteer Training

This is a required class for all volunteers participating in the Washback Watcher program. Training is required annually and is usually held in late June. It covers the basics of sea turtle washback origins and how to properly search for, collect, hold and transport washback sea turtles in compliance with the FWC letter of consent for the program. The classroom power point presentation is approximately 1 hour. The field exercise is approx. 30 minutes.

Wildlife Instructor Workshop

Schoolyard Wildlife Instructor Workshop

This program is designed for educators relating to the diversity of subjects on conservation lands. Participants will discuss how relating natural lands and school subjects improves learning. Discover how the natural lands relate to school subjects and activities for students to learn both school subjects and Florida ecology, natural science, and natural history.

RECREATION

Recreation is an activity of leisure, leisure being discretionary time. Recreation activities foster a desire to preserve our natural environment.

Backpacking

Backpacking the Florida Woods

Introduction to backpacking, hiking, and camping on the natural lands. Participants will go on a hike through upland and wetland habitats. Discuss backpacking, hiking, and camping and set up demonstration camp and cook lunch on the trail.

Crafts

Fun in the Sun

Before the kids head back to school they can join LEC staff for this creative workshop. Learn how to harness the sun to make your very own solar print and UV bracelet. You can even make an ocean in a bottle to take home. This program is recommended for children 5 and up. This program is free and is sponsored by The Friends of Lyonia Environmental Center.

Halloween Science

Halloween is almost here and we have some slimy, ghoulish and somewhat tricky experiments for you to try out. LEC staff will teach you how to make your very own fake blood, slime and bubbling potions. This program is free and is recommended for children ages 6 and up.

Holiday Science Workshop

It's beginning to look a lot like the holiday season at the LEC! Are you dreaming of a white winter? Let us bring the snow to you! LEC staff will teach you how to make your very own snow slime, snow paint and more during this festive program. This program is recommended for children 6 and up. Cost for program participants is \$3 each. Space is limited and pre-registration is required.

Paint and take workshop

Come beat the summer heat and paint a terracotta plant pot to take home. This program is recommended for both children and adults ages 6 and up. This program is free and is sponsored by The Friends of Lyonia Environmental Center. Supplies only available for 15 participants. Registration is required.

Tiny Trekkers

Listen to a book with us, take a short hike and make a craft to take home. This program is recommended for children ages 2-5. This program is free and is sponsored by The Friends of Lyonia Environmental Center.

Geocaching

Geo-Eco Challenge

Introduction to using the Global Positioning System (GPS) and orienteering to learn about site habitats. Students will use a GPS to solve habitat-specific puzzles as they traverse the site.

Outdoor scavenger hunt

Join LEC staff as we host a "guided outdoor scavenger hunt, with an intro to geocaching. Come "cache" in on this no experience necessary leisurely stroll through Lyonia Preserve. Be prepared to see birds, butterflies, trees and at the end you might even find some hidden "cache". This program is recommended for beginners ages 10 and up and is free of charge.

Nature Interpretation

Festive fall wreath making

Sip on some hot apple cider and get those creative juices flowing! Bring a friend along to the LEC classroom to create a one of a kind wreath using materials found in nature. Ribbon, silk leaves and flowers, and other decorative materials will be provided. This program is sponsored by the Friends of Lyonia Environmental Center. Cost per wreath is \$8.

Nature into Art

Introduction to the uniqueness of nature on the lands. Participants will go on a hike to collect upland and wetland materials and use upland and wetland materials to produce a creative expression.

Nature Photography Workshop

Capturing nature through photographs is quickly becoming a beloved pastime of many people, and learning the basics can make the difference between a so-so picture and a phenomenal one. If you have ever longed to learn how to take a great nature photograph, join Lyonia Environmental Center and St. Johns River Eco Tours for this dynamic beginning photography workshop! During this 4 hour workshop, you will spend the first 2 hours at Lyonia Environmental Center learning the basics of how to take great wildlife and nature photos. At the conclusion of this classroom time, there will be a short lunch break, and time to travel to St. Johns River Eco Tours, located at Highbanks Marina, to board the boat. You will then spend 2 hours on the water with the instructor using what you learned in the classroom. At the end of the shoot, there will be a question and answer session with the instructor.

Observation Hunt and create a Hiker

Introduction to observation and the natural lands. Students will go on hike and practice using senses to examine the natural lands. We will use senses of touch and sight to discover interesting components of land matching descriptions on provided cards and collect said components and utilize them in a creative expression of a hiker.

Painting with Nature

Come beat the summer heat and paint a terracotta plant pot to take home. This program is recommended for both children and adults ages 6 and up. This program is free and is sponsored by The Friends of Lyonia Environmental Center. Supplies only available for 15 participants. Registration is required.

Poetry of the Woods

Introduction to the diversity of the natural lands and its relationship and components through poetry. Students will examine language in relation to the natural lands. Then go on a hike and observe the site and describe and write down their experience of the site.

Sand Art Pledge

Students will gain environmental stewardship towards Lyonia Preserve by making/decorating personal pledges that highlight ways that they can help protect endangered species, the environment and Lyonia Preserve. This is an indoor activity with a take home craft.

Valentines of Nature

Do you have a special someone that loves nature? Valentine's Day is just around the corner – why not give them a handmade card they will treasure! Join the LEC education staff in our classroom to create a one of a kind card that will reflect the beauty of the natural world around us. This program is free.

Orienteering

How to use GPS

Lyonia Environmental Center naturalists will guide you through this program where you will learn to use

a handheld GPS unit. Learn the basics of GPS navigation when in an outdoor setting, and then test your skills as you navigate your way through a course at a local park. Space is limited to 15 people, so register early!

Navigation Contest—Compass vs. GPS

Introduction to navigation with compasses and GPS. Students will discover the importance of navigation tools in regard to forestry. Then divide in teams and compete to compare the compass and GPS as navigation.

Signs of Wildlife

Pets

This program satisfies requirements for the Pets (It's Your Story: Tell It!) Badge. Scouts will gain a better understanding of the differences between "wild vs domestic" animals and what is involved with caring for them. During this classroom workshop your group will meet our animal ambassadors up close, tour the LEC and help make a treat that will be given to one of the LEC animals.

Summer Camp

MSC Summer Camp

The Marine Science Center offers 9 weeks of summer camps. The camps use immersive experiences in our local environments to teach about our marine systems and local wildlife. Students canoe in Mosquito Lagoon to study live manatees; pull seine nets in Ponce de Leon Inlet to sample marine life; snorkel in Blue Spring Run to observe the marine-based geology of the county; dissect owl pellets to learn about the life history of owls and many more adventures. Classes are offered for specific age groups. Each week culminates in a group cookout and a presentation by the students to the parents on projects developed during the week. Most classes are one week in length, with 2 weeks offered as short two-day classes for young children (ages 6-8).

Survival in the Woods

Basic Survival

Don Philpott, instructor with UF's Florida Master Naturalist program and a Certified Interpretive Guide, will teach you all the techniques for survival in the event there is a hurricane, tornado or other natural disaster that may occur. Don will also teach some survival skills to use in the great outdoors. The program covers survival techniques, field first aid, how to forage for food and water, how to build a shelter and light a fire and how to put together a survival kit that could keep you alive for weeks for less than \$20.

Safe in the woods

Roger Fulton, a Florida master naturalist, will explain how to stay "found" in the woods, how to read trail marking, and what to do if you lose your way. He will also tell participants how to prepare for their outings and what to do if they encounter wildlife. Free to the public.

Survival in the Woods

Introduction on the use of the natural features of wild lands for emergencies. Participants will discuss preparedness and wilderness survival, emergency necessities and the effects of attitude and other variables on survival. We will practice lighting and extinguishing fires using minimal materials and finding shelter and discuss the basics of wilderness survival and what survival basics the littoral zone and other wetland habitats fulfill, and their importance in human woodland survival.

Wildlife

Bird nest box workshop

Nest boxes are a great way to attract wild birds to your yard. They provide birds with shelter and a place

to raise their young. Build your own nest box to take home. Supplies are included and tools will be provided for use.

Family Game Day

Drop in with the whole family and join LEC staff in our classroom to play some fun games like Birdopoly, Reptile Bingo, Scrub Jeopardy or work on a puzzle together. Spend some time examining specimens in the microscopes and meet our resident live animals. This program is free.

Wildlife Observation

Animal Tracking and Scat ID

Introduction to finding and identifying animal signs. Students will recognize various animal tracks and create plaster casts of animal tracks. You will recognize various types of animal scat and discuss how scat can be used to learn more about an animal. Then discuss the procedure and importance of prescribed fire in maintaining animal habitat.

Beginning Birding

Introduction to bird-watching and bird-watching techniques. Participants will discover various techniques for bird-watching. Learn to use binoculars and other bird-watching equipment, ride an eco-buggy to various upland and wetland habitats to look for birds and discuss procedure and importance of prescribed fire in maintaining bird habitat. We will also practice bird identification.

The World Adventure Program

This workshop will focus on the following badge: "Tools for Fixing and Building". Scouts will learn the importance of providing birds a source of food and attracting wildlife to their backyard while staff teach them how to build a bird feeder during this 2 hour workshop.

SUSTAINABILITY

The concept of sustainability is that we should be able to meet the needs of today without compromising the ability of future generations to meet their own needs.

Florida Friendly Landscaping

Butterfly Gardening with Native Plants

Kevin Bagwell of Full Moon Native's, Port Orange, will discuss how to attract butterflies using Native and Waterwise plants in your landscape. This program is Free to the public. Plants will be available for purchase.

The Art of Maintaining a Florida Native Landscape for Wildlife

Ginny Stibolt, author of "Sustainable Gardening for Florida" & "Organic Methods for Vegetable Gardening in Florida", returns to the LEC! During this presentation Ginny will provide ideas and tools to help people who are new to native gardening create an authentic Florida landscape that is presentable even in neighborhoods with HOA's. This program is free.

Green Volusia Program

Clean green in the New Year

Household cleaning products can be quite costly. Start 2014 out right by joining LEC education staff as we learn ways to save money and the planet with some tried and true homemade cleaning products that are easy to make and easy on the pocketbook. This program is free.

Coffee-can Hydroponics

Master the art of hydroponics during this free program. Joe Sowards, an urban and residential horticulturist with the University of Florida/ Volusia County Extension, will explain how to grow

vegetables and flowers in old plastic coffee containers. No dirt required! According to Mr. Sowards, you can use this method to grow cleaner, healthier vegetables in less time with no need to fight weeds, fungi or insects. The plants are great for small spaces and school projects. This program is free.

Eating local, eating seasonal

What does it mean to be a “locavore” or to “eat seasonal”? Join us as we discuss the benefits and common misconceptions of eating locally grown and seasonally produced food.

Green Elements of the LEC

Earth day is almost here! Come learn on this exploratory gallery and amphitheater tour the initiatives LEC has taken to earn a Silver LEED certification. Learn how you can incorporate these elements and concepts into your very own home. This program is free.

Greening your holiday

Christmas is almost here! LEC staff will teach participants easy tips on how to “green” up your holiday by giving some practical tips on how to become an earth friendly shopper. Participants will also learn easy ways to incorporate “living green” into their everyday routine. Each attending participant will receive a free Lyonia reusable bag. A holiday sale in the LEC gift shop will be offered during the month of December. Following the program, participants can take advantage of an additional one day only savings to finish up any last minute shopping. An earth friendly gift bag filled with goodies will be raffled off to one lucky participant at the end of the program. This program is free.

Library Backpacks

The sustainability backpacks are designed to be learning tools to help the public make lifestyle choices that are better for the environment and for their wallet. They include water and energy conservation tools and information, a cookbook with healthy and affordable recipes, activity workbooks and a DVD for children, books and flashcards with green tips and information. The backpacks are available through Volusia County Public Library and can be checked out from one of the six regional libraries for three (3) weeks at a time, visit www.volusialibrary.org for backpack availability. There is a fun sustainability challenge for each of the three weeks

Natural Dye Easter Eggs

Did you know you can use items found in your cupboard and fridge to color Easter eggs? Join LEC staff in the classroom to learn some techniques using items like coffee, blueberries, onions, cabbage, spices, and more. This program is free.

Naturally Christmas workshop

’Tis the season to decorate your home with what nature provides. During this program we will teach you how to use natural items to decorate your home and give it a one of a kind look. From pine cones, twigs and acorns we will use our creative minds to see what we can put together. This program is free and is sponsored by The Friends of Lyonia Environmental

New Year, new food

Eat local, eat seasonal! Join us as we discuss the benefits and some common misconceptions of eating locally grown and seasonally produced food. You will also learn about local farmers markets in the area where you can find locally grown food. This program is free.

Square Foot Gardening

Join Kevin Bagwell from Full Moon Natives in Port Orange as he discusses a uniquely simplified method of gardening that produces 100% of the harvest, in only 20% of the space, using 80% less water - no tilling, no weeding, no kidding! Grow your own veggies on a patio, deck, balcony or yard. This program is free.

Sustainable Seafood

In 2012, Florida ranked among the top 12 states for fresh seafood. In addition, Florida has approximately 347 seafood processing plants! Join LEC staff in taking a look at the seafood industry, and learn about

the current state of our fisheries and how to make sustainable seafood choices. Participants will receive informational handouts and recipes. This program

The Bear Adventure Program

This workshop will focus on the following badge: "Take Care of Your Planet". Scouts will collect trash in the preserve during a 1 hour guided hike, plant a preapproved native plant and trim plants in our butterfly garden.

Recycling

Back to school swap-o-rama

Up-cycle your wardrobe or toy chest by participating in this fun event as we practice the 3 R's-Reduce, Reuse, Recycle! Lyonia Environmental Center will be hosting a toy and clothing swap. Participants are asked to bring clean, well-maintained clothing of all sizes (no rips, holes, or stains), shoes, accessories and toys in good condition to Lyonia Environmental Center on the day of the program to swap. Limit of 10 items per participant. Participants will be given a token for each item brought that can be used to swap for the corresponding number of items. Participants may bring items from 1-2 pm the day of the program. If you are unable to participate, but have donations of these items, they can be dropped off at the LEC.

Earth day crafts

Bring your "think green" creativity and come make some earth friendly crafts to take home with you. During this indoor workshop we will use recycled products to make some interesting crafts. Everything from a recycled garden to an Earth Day wreath and more. This program is free and recommended for children ages 5 and up.

Garbage to Garden: It's Composting Time!

Want to learn how you can save a lot by recycling your leaves? Come join LEC staff and learn through an ancient process, known as composting, how you can make a difference in our environment. Gardeners refer to it as "black gold" because of the richness and value it adds to your soil. In this workshop LEC staff will teach you helpful tips for beginning your very own compost heap and it doesn't cost a cent! This program is free.

It's easy being green

Come join LEC staff and learn how you can make a difference in our environment by composting at home. Gardeners call it "black gold" because of its richness in nutrients and the value it adds to your soil. In this workshop you will learn helpful tips for beginning your very own backyard compost pile. Composting is easy to learn and it doesn't cost you a cent!

Out with the old, in with the news

Join LEC education staff for this fun program where we will be learning how to up-cycle old newspaper and magazines into beautiful, usable items to decorate your home. This program is free, and sponsored by the Friends of Lyonia Environmental Center.

Plantable paper

Join LEC staff to learn how to turn junk mail into beautiful plantable seed greeting cards and gift tags.

Recycling rocks-Holiday style

Get in the holiday spirit by joining LEC staff in our classroom and learn techniques to make some awesome ornaments for your tree using recycled materials. Show your support of the 3 R's (Reduce, Reuse & Recycle) by making your own take home ornament in this fun, festive activity. Hot apple cider will be served. Cost of program is \$3.00 per participant.

Regular or Decaf? Coffee Filter Crafts

The art of recycling products! Other than making our coffee, come join us in our classroom to learn how

to make some fall festive creative crafts from coffee filters. This program is free.

Rosie Petal: Make the World a Better Place

Scouts will have the opportunity to earn their Rosie petal by learning ways in which they can reduce waste and recycle. LEC staff will guide scouts on a hike where they can help clean the preserve by picking up trash they may see along the way. Afterwards, staff will teach scouts how they can reuse products during a classroom activity where they will make thank you cards out of recycled materials. These cards will be delivered to local area wildlife rehabilitation facilities.

Water Conservation

Rain barrel workshop

Looking for ways to conserve water? Facilitators in this workshop will explain how residents can conserve water with rain barrels and show how to make a rain water collection system. This is an informational session, and materials will not be provided.

WATER

Water is the most abundant compound on Earth's surface, covering 70 percent of the planet. In Volusia County, water quality and quantity are important issues.

Florida's Aquifer

Clover Petal: Use Resources Wisely

During this workshop, participants will have an opportunity to earn their Clover petal by learning how they can use resources wisely. LEC staff will teach scouts the importance of our Florida aquifer and how to make a craft out of recycled materials to take home.

Florida's Aquifer

Drip-drop....drip-drop....what is that sound? Why, it is the sound of water drops, of course! As rainwater falls it percolates or drains through our soils. Students will investigate how important percolation is to our aquifer recharge, and how differences in soil and ground types can affect the rate of percolation. This is an outdoor activity.

Wonders of Water

This program satisfies requirements for the WOW (It's Your Planet: Love It!) Badge. Come join us as we talk about the water cycle! Scouts will take part in an aquifer activity to learn about water pollution and its effects on our environment. Afterwards we will take a short hike in our preserve to learn about ephemeral wetlands. After the hike, scouts will make a pledge to LOVE, SAVE and SHARE what they have learned about water on personal pledges to be displayed to LEC visitors.

Water Cycle

GLOBE Atmosphere with Cloud Art

Introduction to the water cycle and weather. Students will discuss the water cycle and how it affects the climate and the importance of the water cycle and how it affects the lands. We will also observe and identify clouds.

Water Cycle-Clouds to Wetlands

Water Cycle—Clouds to Wetlands

Introduction to clouds and the water cycle. Students will discuss how clouds form and the role they play in the water cycle. You will be taught how clouds foretell the weather and observe and identify clouds.

Water Quality Monitoring

Water Quality Testing

Introduction to water quality and water quality testing. Students will discuss factors that affect water quality, discover the different methods for water quality testing and what each method measures about the water. We will discuss why knowing various facets of water quality is important and practice testing water quality samples.

Why do we test the water?

Marine Ecosystems Exploration

Students will explore the chemical and biological components of a mangrove salt marsh estuary. Hands on Lab activities, water testing, seine and plankton netting followed by classroom activities. The group will also have free time to explore the Marine Science Center.

Super Scientist Sunday

Science can be fun! Bring the family and join the LEC education staff in our classroom as we conduct some fun science experiments, learn about water testing and explore specimens under the microscope. This program is free.

ZOOLOGY

Zoology, or animal biology, is the branch of biology that relates to the animal kingdom, including the structure, evolution, classification, habits, and distribution of all animals.

Aquatic Animals

Aquatic Critters

Introduction to aquatic faunal organisms, including benthic macro invertebrates. Participants will discover wetland habitats, use scientific equipment to collect specimens of aquatic organisms and identify specimens and discover their effects on the wetland habitat.

Flippers, Webs and Claws

A guided tour of the Marine Science Center and how they approach the needs of the creatures and the ecosystem they live in.

Jumpin' Jellyfish

There are more than 200 species of jellyfish found worldwide. Join us in the classroom to learn about what they eat, where they are found, if they are edible, and other fascinating facts about the amazing jellyfish. Kids of all ages can make a take home jellyfish craft following the discussion. This program is free.

Manatees - 3rd - 5th Grade Class

Basic information on manatees, how and why they live here, why they are important, and hazards to their existence. Participants learn basic facts about manatees, how and where they live, and threats such as entanglement and boat strikes.

Manatees - Adult Class

Learn the basic facts about manatees, their behavior and their habitats. Participants learn basic manatee physiology, behavior and threats to their existence.

Manatees - Marine Science Center Summer Camp

Canoe in Mosquito Lagoon and Blue Spring and learn about manatees, photograph them, time manatee breaths, and sketch scar patterns. Students learn manatee physiology, behavior, manatee habitat, and hazards from boat strikes.

Manatees - Pre-K Classes

Basic information on manatees, how and why they live here, and why they are important. Students learn basic facts about manatees, how and where they live, and threats to their existence.

Marine Cephalopod Encounter-Squid Dissection

A squid dissection with a coinciding PowerPoint presentation. This program includes a pretest and then a squid dissection with a coinciding PowerPoint presentation and education/discussion on Marine Cephalopods followed by free time to explore the Marine Science Center.

Marine Mammals - Adult Classes

Beginning to intermediate level instruction on marine mammals, their physiology, behavior, and habitats. Participants learn marine mammals common to our area, their physiology, behavior, habitat, and threats to their existence.

Marine Mammals - K - 5th Grade Activity

Short 20 minute activity teaching students about marine mammals.

Mollusks and Their Beautiful Shells Wading Hike

Introduction to mollusk biology and ecology. Participants will discuss mollusk biology and habitats and adaptations of mollusks to their habitats. We will then go on a hike to look for mollusks and examine mollusk signs and identify mollusks.

Mollusks and their Shells

Introduction to mollusk biology, habitat, ethnology, and mollusk shells. Students will go on wading hike to observe and identify mollusks and discover how the habitat affects what mollusks are found in an area. We will also find and identify signs of mollusks.

North Atlantic right whales

Some of the most endangered large whales in the world are heading our way! Right whales have been typically sighted off the Florida coastlines between November and April. Rich Colesanti, Florida Master Naturalist and Marine Science Center Education Specialist returns to the LEC for this presentation! Rich will explain why these whales are coming to our area, why they are endangered and what wildlife officials are doing to help protect this species.

Old Florida Cane Pole Fishing

Introduction to the ecology and importance of fish using old-fashioned cane poles. Participants will explore the wetland and shoreline habitat and discuss the importance of water quality for fish. We will also discuss the importance of the lake watershed for water quality and discover how to fish with a cane pole. We will practice catching and identifying

Shark sense

Join the LEC education staff to learn more about these strong, magnificent apex predators of the sea. We will cover topics such as species identification, life span, diet, and will even be dispelling some shark myths. Test your sense of smell to see how well you could find prey by "hunting" like a shark does in a fun activity. This program is free.

Super Sharks

To learn about Sharks and how they live in the ocean. Completion of the activity work sheet and hands on experience with shark specimens. There will also be time to explore the Marine Science Center.

Teeny Critters of the Pond

Introduction to wetland flora and fauna. Students will use dip nets to collect aquatic macro invertebrates that in wetlands and use magnification tools to observe and identify specimens.

Birds

Backyard birds

This classroom program includes information on bird anatomy, adaptations, migration and the environmental importance of birds. Participants will also learn how to identify some different native birds in our area. Samples of bird feathers, eggs, and beaks will be available for the participants to experience many adaptations that birds have to allow them to survive. This program is free.

Beginning birding workshop

For those that have a passion for bird watching this workshop is a great opportunity! Staff will teach this beginning birding class that is designed to familiarize new birders with the use of binoculars, bird field guides and provide some tips of what to look for when sighting a bird in the field. Lynn will also describe some habitat differences that will help with bird identification and recommend ways in which to keep records of the birds seen in the field. This program is free and is recommended for children ages 8-13.

Bird Study

In this program Scouts will learn how to properly use and care for binoculars, how to properly use a bird field guide, and how to keep a list of the birds they observe during an Education staff guided hike into our preserve. After the hike, they will return to our classroom where they will build a bird feeder and learn the appropriate places in which to place it in their yard.

Build a Bird

Students will learn about the anatomical features of birds and the adaptations that help them to survive in the environments in which they either visit or reside. We will compare and contrast features of different types of birds in relation to their environment. Students will use critical thinking skills as well as personal creativity to design a bird, while explaining their reasons for “building” a bird the way they chose to do so. This is an indoor activity with a take home craft.

Early bird gets the worm!

Education staff will lead this hike into the preserve to observe what native birds are out and about searching for food. Bring your binoculars and cameras for this wonderful birding opportunity! This program is free.

Fabulous Feathers

Lyonia Preserve is home to several species of birds. Students will learn how to recognize some of them by sight and by sound.

Living in harmony with urban birds

Join us on this classroom exploration of how to attract birds, reduce possible threats to birds in your backyard and ways to create a bird-friendly space for birds in your neighborhood. Regardless of the space you have, you can attract wildlife to your area. This program is free.

Look who's caching now!

In this classroom exploration LEC staff will teach participants how our Scrub jays cache their acorns and store up for the winter season. There will even be a chance for participants to win a prize if they can guess how many acorns are in our designated jar. This program is free and open to all ages!

Meet the Florida Scrub Jay

Introduction to the federally threatened Florida scrub jay. Students will explore the biology, ethnology, and ecology of the Florida scrub jay and discuss the importance of Florida scrub jays and how they came to be threatened. We will also discuss what land managers are doing to preserve Florida scrub jays and the procedure and importance of prescribed fire in maintaining Florida scrub jay habitat. We will also watch a demonstration of banding and jay-surveying procedures.

Saving Scrub Jays

Join Rusty, Lyonia Environmental Center's mascot, as we learn about the anatomy, diet and behavior of the threatened Florida Scrub-jay. Learn ways in which we can help protect this species, found only in Florida! Following the presentation, participants will join LEC education staff for a stroll through Lyonia Preserve to try to observe these beautiful birds in their natural habitat.

Scrub Jay Behavior

Students will learn about scrub jay anatomy, vocalizations, behavior, family life and what can be done to help this endemic species survive.

Scrub Jay Puppets

Introduction to the threatened Florida scrub jay and its habitat. Students will observe scrub jays and discuss scrub jay biology and ecology. We will examine how the natural lands fulfill the needs of Florida scrub jay and discuss the procedure and importance of prescribed fire in maintaining scrub jay habitat. You will create a display to illustrate what you learned.

Shore Birding Hike

Introduction to shore birds. Participants will go on a hike along the shoreline and discuss identification tips and how to recognize characteristics of shore birds vs. other kinds of birds.

Talking Turkey Hike

Introduction to Osceola wild eastern turkey ethnology and vocalizations. Participants will discuss and practice turkey calls and the importance of wetlands as turkey habitat. We will go on a hike in turkey habitat and attempt to call a turkey. We will then discuss and practice calls for other native animals and discuss the role of turkeys in the ecosystem and on the lands.

Wild About Birds—Live Bird-of-Prey Encounters

Introduction to the natural history, biology, ecology, and ethnology of birds-of-prey, and their relationship with humans. Participants will examine the biology of birds-of-prey and examine several species of birds-of-prey. We will discover how birds-of-prey survive in the wild and explore the habitats of birds-of-prey. We will also discover how they affect and are affected by humans.

Exotic/Invasive Animals

Extraordinary Exotics

Choosing an unusual animal for a pet can be a fun learning process, but should not be done without proper research. Join LEC education staff to learn what to consider when looking at possible exotic pets and the factors that should influence your decision. Following the discussion, meet our adopted resident exotic animal ambassadors.

Invasive Animal Species

What is an invasive animal species? What effects do they have on our native animal species? Join LEC staff as they teach you what some of these animals are and how they can affect our native animal populations. Learn some of the protective measures wildlife officers have taken to protect native species from these intruders.

Florida Turtles and Tortoises

Florida Turtles- Their Biology and Ecology

Introduction to native turtles found on the natural lands. Participants will see presentation on Florida turtles and go on hike through wetlands to look for turtles on the land.

Gopher Tortoise Survey

Introduction to gopher tortoise habitats and biology. Students will discuss the importance of the gopher

tortoise to the scrub habitat and biology and ethnology of gopher tortoises. We will find, observe, measure, and record data on gopher tortoise burrows and discuss the procedure and importance of prescribed fire in relation to gopher tortoises and their habitat.

Gopher Tortoises-Landlord of the Scrub

During this indoor/outdoor activity students will learn about the lifestyle of a Gopher tortoise, the obstacles they encounter, and the essential role they play within the scrub habitat as a keystone species.

Florida Wildlife

Adaptation Advantage

Students will learn about native wildlife species and their adaptations. This hands on interactive program features several preserved animal specimens including the Florida black bear, bobcat, wild turkey, Bobwhite quail, and raccoon. This is an indoor activity.

Native VS. Exotic

Meet the LEC animal ambassadors! Learn the difference between native and exotic and about the impact exotics can have on our native species. This program features live animals and is an indoor activity.

Insects Around Us

Ant Lunch and Ants for Lunch

Introduction to the ecology and feeding behavior of ants and ant lions in the scrub. Students will use scientific method to design, set up, and carry out an experiment on ant feeding and observe and discuss the hunting techniques and biology of ant lions. We will also discuss the relationship between these animals and the porous scrub soil and the procedure and importance of prescribed fire in maintaining scrub and ant habitat.

Beginning Bee Keeping

Join expert Beekeepers from Winter Park Honey in discussing how to set up a beehive in your own backyard, what you will need, where to buy it, and how to care for it.

Beneficial bugs

There are over 4 billion classified insects! Some of these insects can be Mother Nature's own pest control. One of the best ways to control pests in your garden is to invite their natural enemies. Join LEC education staff in our classroom to learn some tips on how to encourage these insects to visit your garden. Everything from ladybugs to predatory wasps and more. This program is free.

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Bugs

This program satisfies requirements for the Bugs (Legacy: Naturalist) Badge. Let's explore the world of bugs and why they're so important to our environment! During an indoor classroom workshop, scouts will get up close and observe bug specimens. Then join LEC staff on a guided hike through the preserve where they will see these amazing creatures in action. Afterwards scouts will make a bug craft to take home.

Butterflies and blooms workshop

Join our education staff in the LEC classroom as we learn about local butterflies and their host plants found in Volusia County. LEC education staff will lead participants in constructing a rearing cage and give

instruction for raising Monarch butterflies at home. Participants will also take home a starter milkweed plant. Cost of this program is \$10 per participant. Space is very limited and pre-registration is required. Call 386-789-7207 Ext #21028 to reserve your spot for this exciting workshop!

Butterflies- Flying Flowers of Central Florida

Introduction to native butterflies on the natural lands. Participants will see photos of local butterfly species and go on a hike to observe butterflies, caterpillars, host plants and nectar plants on the site. We will discuss the importance of wetland flowers and host plants to butterflies and the procedure and importance of prescribed fire in maintaining butterfly habitat.

Chiggers-scratching the surface

Have you experienced the irritating itch of a chigger bite? Join LEC education staff to learn more about these small creatures that pack a punch. Chigger anatomy, their role in nature as well as bite prevention & relief methods are topics that will be covered in this free program.

Fly Away Butterfly

Butterflies and moths are beautiful, amazing insects! Students will be intrigued with the metamorphosis process as they learn to identify the stages of a butterfly's life cycle, migration patterns and the importance of host plants. This program will include live caterpillars (with possible butterflies) if booked in May or June. This is an indoor activity with a take home craft.

Insects in Various Habitats

Introduction to the insects found in different habitats. Students will use various traps to capture and examine various insects. We will practice netting techniques to capture insects and use magnifying tools to examine and identify insects. Then we will examine the effects of habitats on insect biodiversity and discuss the procedure and importance of prescribed fire on insect habitat.

Insects of the scrub

Head out into the preserve with LEC staff in search for the various insects that inhabit the scrub. Learn how to identify certain insects and what roles they play in the scrub habitat. This program is free.

Insects-Good or Bad?

Introduction to insects of Florida, including discussion of invasive non-native insects, with emphasis on benefits and problems caused by insects. Participants will inspect insect traps in upland and wetland habitats and identify insects and explore insect biodiversity on the lands. We will discuss procedure and importance of prescribed fire for insect habitat and benefits and problems insects cause. We will also discuss invasive non-native insects and problems they cause in Florida.

Leaf Litter Critters

Introduction to select invertebrates found in leaf litter on the natural lands. Students will examine biology and ecology of earthworms, pill bugs, and slugs. We will observe select invertebrates and use scientific method to set up experiments to compare characteristics of select invertebrates.

Magnificent Monarchs workshop

Join us in our classroom as we learn about local butterflies and their host plants found in Volusia County. LEC education staff will lead participants in constructing a rearing cage and give instruction for raising Monarch butterflies at home. Participants will also take home a starter milkweed plant. Cost of this program is \$10 per participant and is sponsored by The Friends of Lyonia Environmental Center. Space is very limited and pre-registration is required. This program is free.

Native Florida Bees and Wasps

Would you like better pollination of your fruits and vegetables, resulting in more yield? Learn about the benefits of native bees and wasps and how you can make your property more productive. You will learn how to make your yard bee and pollinator friendly, and possibly save some money. Presentation will be

given by Ed Williams, Master Beekeeper.

Secret Weapons

Many insects spit, spray, sting, and bite in response to being disturbed or threatened. Sometimes an insect's physical appearance itself can be a type of self-defense. Students will learn about insects, scorpions, spiders and other creatures that use these tactics and how these adaptations have helped them survive for centuries. This is an indoor activity.

Spider Species of Florida

John Serraro will give a presentation on all of the common native spider species that live in our state. John will discuss the diversity, beauty and ecological importance of these arachnids, as well as the very few species that are dangerous to humans. There will be a few live specimens available for viewing and discussion after the presentation.

Summer days, firefly nights!

The fate of fireflies all over the world is disappearing! During this indoor workshop LEC staff will discuss some of the reasons these insects are in peril and some helpful tips we can do to help. This program is free.

Teeny Tiny Scavenger Hunt

Introduction to microhabitats. Students will use scientific tools to collect specimens and observe them under magnification, then classify specimens: animal, vegetable, or mineral; and as organic or inorganic.

Mammals

Attracting Nature's Natural Insect Repellent: Bats

Did you know that in some bat species, each bat can capture from 500 to 1,000 mosquitoes in a single hour? A bat box can provide our native Florida bats with a much needed safe place to live. They will return the favor by eating insects around your yard. During this workshop participants will learn the importance of bats, the benefits that come from attracting bats, and how to construct our very own bat box to encourage them to come to your yard. Space is limited to 10 participants and preregistration is required. The fee for this program is \$15 per bat box and is sponsored by The Friends of Lyonia Environmental Center.

Bats of Florida Presentation

Shari Blissett-Clark of Bat Belfrys will explain bats' contributions to the environment and debunk common myths that give rise to unfounded fear of these flying mammals. She'll also bring a live bat and discuss bat biology, rabies and conservation efforts during this free program.

Florida Black Bear

Cathy Connolly, outreach technician with the Florida Fish and Wildlife Conservation Commission's Black Bear Management team will be at the LEC to talk everything bear! Learn about their biology, behavior and the issues surrounding the black bear. Cathy will bring with her a bear pelt and skull for participants to look at, and will answer any questions you may have about this protected species. This program is free.

Manatees

Manatees on the move

As winter approaches, manatees cannot tolerate the colder water temperatures and being heading to our fresh water springs. Join LEC staff as we learn about these amazing creatures and their travels. Following the presentation we will be drawing life sized manatees and participants will be entered into a drawing to win a free manatee gift bag. This program is

Owl Pellet Dissection

No bones about it-Owl pellet dissection lab

Did you know owls eat their prey whole? Owls cannot digest bones and therefore, regurgitate them in pellets. Examine the contents of owl pellets with us to learn more about what owls eat, attempt to reconstruct a prey skeleton.

Owl Pellet Dissection Lab

Owls can't digest bones, fur & feathers and therefore regurgitate them in pellets. In this hands-on lab, participants will learn basic owl anatomy, which species of owls are frequently found in Volusia County and will examine the contents of owl pellets while learning what and how owls eat. This is an indoor activity. (Bones may be taken home if desired).

Raptors Live

This program includes a raptor presentation with live birds of prey. This program includes a raptor presentation with live birds of prey, a pretest and then a hands on owl pellet dissection lab. The group will have free time to explore the Marine Science Center and a walk through the bird sanctuary.

Plankton Pull and Plankton Lab

Ocean and Plankton Lab

A hands-on Inlet side and river plankton collection and one large seine net pull for collection and observation of species in the estuary. Program includes a hands-on Inlet side and river plankton collection and one large seine net pull for collection and observation of species in the estuary, then return to the MSC for a Hands on Plankton Lab. Students will also have free time at the MSC to explore the gallery and the sea turtle and bird rehabilitations.

Reptiles & Amphibians

Burrr! Baby its cold outside

Join LEC education staff in our classroom to learn about some ectothermic (cold-blooded) species in the animal kingdom and why some become sluggish in cold weather. Hot chocolate will be served. This program is free.

Meet the reptiles

Do snakes have eyelids? How are lizards able to change colors? What is a skink? Learn some fascinating reptile facts during this live animal encounter with LEC's reptile ambassadors. This program is free.

Radical Reptiles

Students will learn about the reptiles that live in Lyonia Preserve. Students will learn about the reptiles that live in Lyonia Preserve including six line race runners, scrub lizards, black racers, eastern diamondback rattlesnakes, and the important keystone species-the gopher tortoise.

Reptile & Amphibian Study

An introduction to Florida snakes. Scouts will be part of live animal interaction where they will learn what Brooks's king snakes and Red rat snake species eat, what their native habitats are, their average lifespan, and natural predators. Education staff will also teach them about population and conservation issues and what officials are doing to protect certain reptilian species. Education staff will also teach scouts how to identify different species of reptiles and amphibians that can be found in the United States.

Scales and tails

Can you think of a group of animals that have both scales and tails? The reptiles do! Florida is home to 46 species of snakes, including six that are venomous? Join the LEC education staff in our classroom where we will learn about some of the more commonly encountered species. Following the

presentation, stick around to meet some of our resident snake ambassadors and observe some reptile specimens. This program is free.

Slime vs. scales

Join us as we explore the many differences between a reptile and an amphibian, as well as identify some of the different species that live in our surrounding area. Participants will also have an opportunity to meet some of our resident reptile ambassadors. This program is free.

Sea Turtles

Master Naturalist Sea Turtle Class

This approx. 1 hour power point presentation covers basic sea turtle biology and specific information about sea turtles nesting in Volusia County. It includes information on the sea turtle lighting ordinance and washback program specific to Volusia County.

Sea turtles of Volusia County (for teachers)

This approx. 1 hour power point includes a presentation on nesting sea turtles in Volusia County. It covers biology, nesting history, a brief explanation of the HCP, explains how surveys are conducted and nests are marked and monitored for lighting problems and other concerns regarding sea turtle survival and management specifically along Volusia beaches.

Signs of Wildlife

Animal track identification

Calling all wildlife trackers! Join LEC staff on this exploratory hike in the preserve in search of the wildlife that inhabits our unique scrub habitat. During this hike you will be given animal track identification sheets and will be taught how to identify, interpret and follow different animal tracks found within the preserve. This program is free.

Naturalist Badge Program

Scouts will take a 1 hour guided hike where they will observe different animal species in Lyonia Preserve, learn the difference between “poisonous” and “venomous”, and learn how to identify poisonous plants. Scouts will play “Nature Bingo” while on their hike. Following the hike, Scouts will be given a tour of the LEC exhibit gallery where they will learn about the Florida Scrub jay and what is being done to protect this species. Scouts will then participate in a classroom workshop where they will learn about bird flyways and which birds use them.

Reading the Signs of Wildlife

Introduction to animal signs. Participants will examine animal tracks and scat and discuss what information can be deducted from animal signs. We will go on a hike and observe and identify animal signs then discuss procedure and importance of prescribed fire for animal habitat. We will recognize the importance of water bodies for wildlife and create plaster casts of animal tracks.

Signs of Wildlife

Students will learn how to identify animal tracks and other signs of wildlife found in Lyonia Preserve.

The Nose Knows

Many animals have an extremely keen sense of smell. Students will learn how animals use this sense to find food, territory, a mate, etc. They will then use their own sense of smell to “hunt” for prey in a fun activity. This is an indoor activity.

Tracks & Scat

Tracks and scat can tell us a lot! Students will learn how to identify evidence left behind to determine what animals live in or travel through a habitat. This is a hands-on activity using rubber models of scat, track guides and plaster tracks. (Students will not be creating track

Whose scat is that?

Education staff will lead you on this classroom exploration of what animals leave behind after they have eaten. Learn ways in which these items can help determine what wildlife inhabits different areas. Learn how animals use scat to build homes, attract partners, and send messages and lots more! This program is free.

Wildlife of Central Florida

Naturalist John Serrao returns to the LEC! John will discuss many of the best known, unusual, rare, distinctive, and beautiful species, from spiders and butterflies to reptiles and amphibians to mammals and birds that can be found here in Central Florida.

Wildlife Rescue & Rehabilitation

Do you know what to do if you find an injured Blue jay, Squirrel, Hawk, or a Sandhill crane? The Rescue, Rehab & Release team of the Wildlife Rescue Center will answer that & many more questions about injured & orphaned wildlife in Central Florida. Join us for an informative presentation as Tom Scotti, Dr. Erin Holder, DVM & Dr. Lisa Mason, DVM of Florida Wild Veterinary Hospital explain how you can help to save some of Florida's most precious resources, the animals in need. They will be available to answer questions following the program. This program is free.

Snakes

Florida Critters That Deserve Our Respect

Introduction to snakes, especially the water moccasin that can be found on the natural lands. Participants will discuss water moccasin and other snake biology, ecology, and ethnology while observing live snakes. We will debunk common water moccasin and snake myths and misconceptions and discuss the procedure and importance of prescribed fire in maintaining snake habitat, and how snakes survive fires.

Snakes of Florida

Did you know that Florida is home to 46 species of snakes, including six that are venomous? Join the LEC education staff in our classroom where we will learn about some of the more commonly encountered species. Following the presentation, meet our resident albino corn snake "Blaze" This program is free.

Venomous Snake Walking Sticks

Introduction to the water moccasin and other venomous snakes on the natural lands. Students will use identification guides to discover the venomous snakes that can be found on the natural lands and examine differences between venomous snakes and learn how to identify them. We will also discuss the procedure and importance of prescribed fire for snake habitat and how snakes survive fires and create a model of a venomous snake.