



Environmental Management

Program Offerings

2014-2015



Tours



Programs



K-12 Field Trips



Speakers Bureau



Brochures/Printed
Material



Multimedia



Events



Volunteers/Projects

Environmental Management
123 West Indiana Ave., Room 202
DeLand, FL 32720
(386) 736-5927

Experience Natural Volusia

Volusia County Environmental Management Education Offerings

Botany

- Aquatic Plants
- Coastal Plants
- Ethnobotany
- Grasses
- Leaves
- Native and Exotic Plants
- Plankton Pull and Plankton Lab
- Plant Adaptations
- Pollinators
- Seeds
- Trees of Volusia County
- Wildflowers

	Method of Delivery								
	Tour (T)	Program (P)	K-12 Field Trip (FT)	Summer Camp (SC)	Speakers (S)	Brochure/Print (BP)	Multimedia (M)	Event (E)	Volunteer/Project (VP)
X		X							
X		X	X	X			X	X	
X	X	X	X	X					
X	X								
X									
X	X	X	X	X	X		X	X	
	X	X	X						
X		X	X						
X		X							
X		X							
X		X							
X		X		X					

Earth Science

- Astronomy
- Geology of Volusia County
- Sink Holes
- Soils of Volusia County
- Volusia County Landforms, River to the Ocean
- Weather vs. Climate

X									
				X					
X		X							
				X					

Ecology

- Aquatic Ecosystems
- Coastal Ecosystems
- Decomposition
- Eco Walk
- Fire Ecology
- Fish, Flora and Fauna in the Estuary
- Florida Living 101
- Land Management
- Oceanography
- Plant Communities
- Reefs of Volusia County
- Salt, Brackish and Fresh Water Ecosystems
- Upland Ecosystems
- Wetland Ecosystems

X	X	X	X					X	
X	X	X	X	X	X			X	
X		X							
X		X	X						
X		X	X						
		X	X						
X									
					X				
X			X						
					X				
	X	X	X						
X									
X									

Environmental Management

- Coastal Visitor 101
- Endangered, Threatened or Vulnerable
- Environmental Policy
- Gopher Tracker
- Habitat Conservation Plan
- Land Management
- Land Management Techniques
- Manatee Protection Plan
- Sea Turtle Lighting
- Sea Turtles

				X	X				
				X					
X	X	X							
	X			X	X				
X		X							
X		X							
	X				X			X	X
	X			X	X				
	X	X	X	X	X			X	

X		X							
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Recreation

- Backpacking in the Florida Woods
- Fishing
- Geocaching
- Nature Interpretation
- Orienteering
- Survival in the Woods
- Volusia's Trails
- Wildlife Observation

Tour	Program	K-12 Field Trip	Summer Camp	Speakers	Brochure/Print	Multimedia	Event	Volunteer/Project
X								
		X	X					
X		X						
X		X						
X		X						
X		X						
X		X						
X		X	X					X

Sustainability

- Coastal Resilience
- Florida Friendly Landscaping
- Green Volusia Program
- Monofilament Recycling
- Water Conservation

	X	X		X		X	X	X

Water

- Fertilizer and Water Quality
- Florida's Aquifer
- Freshwater Saltwater Interface
- Role of Nutrients in Water Bodies
- Springs Ecology
- Water Cycle
- Water Cycle-Clouds to Wetlands
- Water Quality Monitoring
- Why do we test the water?

			X					
	X	X						
	X	X						
	X	X						
	X							

Zoology

- Aquatic Animals
- Birds
- Corals
- Flippers, Webs and Claws
- Florida Turtles and Tortoises
- Insects Around Us
- Manatees
- Marine Mammals
- Mollusks and their Shells
- Owl Pellet Dissection
- Sharks
- Signs of Wildlife
- Snakes
- Squid Dissection

	X							
X	X	X	X	X	X		X	
				X				
	X	X					X	
X	X	X						
	X	X	X					
	X	X		X				
X								
X		X		X				
	X	X						

Method of Delivery Legend

- Tour** - A program that uses various locations at a classroom.
- Program** - A class given at a single location.
- K-12 Field Trip** - Activities that are part of a school field trip.
- Speakers** - Subjects where Volusia County can provide qualified people to talk about at events.
- Brochure/Print** - Subject material available in Brochure, flier, or other printed form.
- Multimedia** - Subject material is self driven, i.e. self guided tour via media or written material.
- Event** - Festival, Fair or other venue where Volusia County has a display or presentation.
- Volunteer/Project** - An activity that gathers volunteers to complete a project for the community.



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Aquatic Plants
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Coastal Plants
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Ethnobotany
CLASS NAME	Edible and Medicinal Plants
DESCRIPTION	Learn how humans have historically used the native plants growing in our area, and their importance to wildlife.
OBJECTIVES	Participants will learn how to identify useful native plants, learn where they grow, and how they have been used throughout history
MATERIALS	Plant samples, hand-outs, reference books
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Exotic Plants
CLASS NAME	Air Potato Round-up
DESCRIPTION	Learn about the hazards of the exotic, invasive air potato plant and do a hand removal of the bulbs.
OBJECTIVES	Participants will understand the hazards of exotic, invasive, plants, the value of native plants, and learn how to remove air potato from their yards.
MATERIALS	Gloves, hand tools, garbage bags, buckets, water, sunscreen, identification sheet, sign-in sheet, prizes
INSTRUCTOR	LM, NR

Method of Delivery

- | | | | |
|--|--|--|---|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Exotic Plants
CLASS NAME	Bark—Unique Prints of a Tree
DESCRIPTION	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.
OBJECTIVES	Students will: -examine sand hill, mesic hardwood forest, and sand pine scrub, and compare and contrast the differences of each habitat. -discuss the importance and procedure of prescribed fire and how burning affects different habitats. -observe the differences in bark and leaves between the trees in each habitat. -create plaster casts of bark and leaves.
MATERIALS	Pavilion with tables, tree biology illustrations, modeling clay, plaster of Paris, Styrofoam trays
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Exotic Plants
CLASS NAME	Invasive Non-Native Plant Hike
DESCRIPTION	An introduction to invasive non-native plants and the damage they cause to the natural lands.
OBJECTIVES	Participants will: -go on a hike and examine and identify invasive non-native plants. -discuss problems caused by invasive non-native plants. -discuss how land managers control invasive non-native plants, including the importance and procedure of prescribed fire.
MATERIALS	N/A
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|---|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Exotic Plants
CLASS NAME	Pepper Busting
DESCRIPTION	Learn about the hazards of the exotic, invasive Brazilian pepper plant and do a hand removal of the trees.
OBJECTIVES	Participants will understand the hazards of exotic, invasive, plants, the value of native plants, and learn how to remove Brazilian pepper from their yards.
MATERIALS	Gloves, hand tools, garbage bags, water, sunscreen, identification sheet, sign-in sheet
INSTRUCTOR	LM, NR

Method of Delivery

- | | | | |
|--|--|---|---|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Exotic Plants
CLASS NAME	Russian Thistle Dismissal
DESCRIPTION	Learn about the hazards of the exotic, invasive Russian thistle plant and do a hand removal of the shrubs.
OBJECTIVES	Participants will understand the hazards of exotic, invasive, plants, the value of native plants, and learn how to remove Russian thistle plants.
MATERIALS	Gloves, hand tools, garbage bags, water, sunscreen, identification sheet, sign-in sheet
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|---|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Grasses
CLASS NAME	Grasses and Their Look-Alikes
DESCRIPTION	An introduction to grasses, rushes, and sedges and how to identify them.
OBJECTIVES	Participants will: -go on a hike to see grasses, rushes, and sedges growing in wetlands. -compare and contrast and identify grasses, rushes, and sedges. -discuss procedure and importance of prescribed fire for grasses.
MATERIALS	N/A
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Plankton Pull and Plankton Lab
CLASS NAME	Ocean and Plankton Lab
DESCRIPTION	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
OBJECTIVES	
MATERIALS	Plankton net, and one large seine net and buckets, Microscopes, plankton ID sheets
INSTRUCTOR	MSC, PC

Method of Delivery

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|---|---|---|--|
| <input checked="" type="checkbox"/> Tour | <input checked="" type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Plant Adaptations
CLASS NAME	Bees and Other Pollinators
DESCRIPTION	An introduction to pollinators, especially honeybees.
OBJECTIVES	Participants will: -explore the roles of pollinators in the upland and wetland habitats. -discover the importance of pollinators. -examine the biology, ecology, and ethnology of honeybees. -discuss threats to pollinators. -discover ways to protect and provide habitat for native pollinators. -examine bee-keeping equipment.
MATERIALS	Ed's beekeeping equipment
INSTRUCTOR	LM

Method of Delivery

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|---|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Plant Adaptations
CLASS NAME	Leaves—Fingerprints of a Plant
DESCRIPTION	An introduction to leaves and characteristics that make them unique.
OBJECTIVES	Students will: -name leaf parts and characteristics. -differentiate between types of leaves. -categorize leaves based on type and characteristics. -discuss leaf presses and examine pressed leaves from plants found on the lands.
MATERIALS	Pavilion with tables, pressed native upland and wetland leaves, key of leaf taxonomy, paper, glue
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Plant Adaptations
CLASS NAME	Pollinator Garden Planting
DESCRIPTION	Learn about the value of pollinators and then do site preparation and planting of pollinator plants in a garden.
OBJECTIVES	Students will learn about soils, planting techniques, pollinators, plants attractive to pollinators, tool safety, and how to plant a pollinator garden.
MATERIALS	Gloves, hand tools, garbage bags, water, sunscreen, identification sheet, sign-in sheet
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Plant Adaptations
CLASS NAME	Prickly Pear—Cactus of the Florida Desert
DESCRIPTION	An introduction to the prickly pear cactus.
OBJECTIVES	Students will: -compare the cactus to leafy plants. -discuss cactus adaptations and how they enable it to survive on the lands. -use dissecting and magnification tools to examine cactus parts. -discuss the procedure and importance of prescribed fire for the prickly pear cactus.
MATERIALS	Pavilion with tables, microscopes, magnifying glasses, dissecting equipment, latex gloves
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Seeds
CLASS NAME	Seed Scavenger Hunt
DESCRIPTION	An introduction to fruits and seeds and how they spread.
OBJECTIVES	Students will: -collect seeds and fruits from different habitats on site. -examine and dissect specimens. -name the parts of the fruits and seeds. -discover the different adaptations of fruits and seeds. -discuss the procedure and importance of prescribed fire in seed dispersal and germination.
MATERIALS	Examples of fruit, fruit type ID poster, examples of native fruits from upland and wetland areas, paper bags, microscopes, magnifying glasses, Styrofoam trays
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Seeds
CLASS NAME	Traveling Seeds
DESCRIPTION	An introduction to how seeds disperse from their parent plant to their germination destinations.
OBJECTIVES	Students will: -collect seed specimens from various habitats on site. -use magnification tools to examine seeds. -discover adaptations of seeds enabling them to spread. -discuss the procedure and importance of prescribed fire for seed dispersal and germination.
MATERIALS	Pavilion with tables, large white tube socks, forceps, microscopes, magnifying glasses, petri dishes
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Trees of Volusia County
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Wildflowers
CLASS NAME	Flower Power
DESCRIPTION	An introduction to flowers and plant reproduction.
OBJECTIVES	Students will: -use dissecting and magnifying equipment. -observe and dissect native upland and wetland flowers. -examine the parts of a flower and their purpose. -discuss the interrelationship between plants and pollinators. -discuss the procedure and importance of prescribed fire for blooming plants.
MATERIALS	Pavilion with tables, diagrams of plant parts, tiger lily flower for each student, samples of native upland and wetland flowers, microscopes, magnifying glasses, petri dishes, dissecting tools, Styrofoam trays
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Wildflowers
CLASS NAME	Flower Power Pollination Party
DESCRIPTION	An introduction to flowers and their role in plant reproduction and the interrelationships of flowers and their pollinators on the lands.
OBJECTIVES	Students will: -learn the importance of pollinators and how they affect the natural lands. -use scientific method to set up and carry out a monitoring experiment. -discover which pollinators visit the native flowers on the program site. -discuss the procedure and importance of prescribed fire in maintaining flowering plant growth.
MATERIALS	Blooming Garberia plants, magnifying glasses, stop watches, clipboards, paper, pencils
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Wildflowers
CLASS NAME	The Wonder of Flowers
DESCRIPTION	An introduction to flowers and their role in plant life.
OBJECTIVES	Participants will: -examine forms, colors and shapes of flowers. -discover how the differences among flowers enable different plants to survive. -discuss pollination techniques among different plants. -compare and contrast upland and wetland flowers. -discuss the procedure and importance of prescribed fire in maintaining flower habitat. -discover the purpose of flowers.
MATERIALS	Microscopes, magnifying glasses, dissection equipment, native upland and wetland flowers, tables
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Wildflowers
CLASS NAME	Wildflowers of the Fall
DESCRIPTION	An introduction to native fall wildflowers of Volusia County.
OBJECTIVES	Participants will: -discover flowering plant biology. -discuss the procedure and importance of prescribed fire for wildflowers. -go on a hike through upland and wetland habitats to observe and identify flowering plants.
MATERIALS	Magnifying glasses
INSTRUCTOR	LM

Method of Delivery

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|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Botany
SUBJECT	Wildflowers
CLASS NAME	Wildflowers of the Fall Eco-Buggy Tour
DESCRIPTION	An introduction to fall-flowering grasses and wildflowers of Volusia County on an Eco-Buggy through conservation lands.
OBJECTIVES	Participants will: -observe fall-flowering upland and wetland plants in bloom. -tour wetland and upland habitats and examine the characteristics that determine their flora. -examine flowers with hand lenses to see parts. -discuss importance of fire for many plants to bloom and produce viable seeds.
MATERIALS	N/A
INSTRUCTOR	LM

Method of Delivery

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|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Astronomy
CLASS NAME	Night Sky Star Tour
DESCRIPTION	Observation of the night sky and discussion of its effects on wildlife.
OBJECTIVES	Participants will: -discuss and observe light pollution and its effects on night wildlife. -discover how the night sky is used for navigation by wildlife. -discover the circadian and lunar cycles and how they affect flora and fauna. -discuss the effects of the Moon on water, including the tides. -explore the geography of the night sky. -observe the night sky.
MATERIALS	Telescopes, binoculars
INSTRUCTOR	LM

Method of Delivery

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|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Astronomy
CLASS NAME	Star Tour- The Moon and More
DESCRIPTION	Introduction to the night sky and the Moon, and the effects of each upon the natural lands.
OBJECTIVES	Participants will: <ul style="list-style-type: none">-discover the effects of the Moon on the Earth, as well as the effects of the Earth on the Moon.-discover the uniqueness of Earth's Moon.-discuss and observe light pollution and its effects on night wildlife.-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.-discuss the effects of the Moon on water, including the tides.-observe the Moon, constellations and planets.
MATERIALS	Telescopes, binoculars
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Astronomy
CLASS NAME	Telescope Workshop and Star Tour
DESCRIPTION	Introduction to telescopes, and to night sky and its effects on the natural lands.
OBJECTIVES	Participants will: -discover how to use a telescope. -explore the geography of the night sky. -discover dos and don'ts of telescopes -discuss and observe light pollution and its effects on night wildlife. -discover how the night sky is used for navigation by wildlife. -discover the circadian and lunar cycles and how they affect flora and fauna. -observe the Moon, constellations and planets.
MATERIALS	Binoculars, telescopes, and telescope owner's manuals
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Astronomy
CLASS NAME	Telescope Workshop for Beginners
DESCRIPTION	An introduction to telescopes and how to use them.
OBJECTIVES	Participants will: -discover how to use a telescope. -explore the geography of the night sky. -discover do's and don'ts of telescopes
MATERIALS	Participants' telescopes and owner's manuals
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Geology of Volusia County
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Sink Holes
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Soils of Volusia County
CLASS NAME	Science and Art of Soils
DESCRIPTION	Comparison of soil characteristics between wetland and upland habitats and the factors that affect them.
OBJECTIVES	Students will: - use pedological tools to dig a soil profile. -use a soil-color book to analyze the soil horizons. -examine and discuss the interrelationships between the water table, rainfall, and soil. -discuss the importance and procedure of prescribed fire.
MATERIALS	Pavilion with tables, soil augurs, soil color book, soil sieves, soil thermometers, vinegar in dropper bottles, 12" x 12" muslin cloth pieces, cups of different colors of soil, water
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Volusia County Landforms, River to the Ocean
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Earth Science
SUBJECT	Weather vs. Climate
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Aquatic Ecosystems
CLASS NAME	Coastal Ecosystems Flora and Fauna
DESCRIPTION	An introduction to the coastal environment-soils, water, and native organisms.
OBJECTIVES	Participants will: -go on a hike and explore the coastal environment. -discuss the various components of the coastal ecosystem. -discuss the importance and procedure of prescribed fire.
MATERIALS	Binoculars
INSTRUCTOR	LM, MSC, NR

Method of Delivery

- | | | | |
|--|---|---|--|
| <input checked="" type="checkbox"/> Tour | <input checked="" type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Aquatic Ecosystems
CLASS NAME	Ecosystems
DESCRIPTION	Taking the class on a guided tour in a centers approach around the MSC
OBJECTIVES	
MATERIALS	All items needed at the MSC
INSTRUCTOR	MSC, NR

Method of Delivery

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> Tour | <input checked="" type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input checked="" type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Aquatic Ecosystems
CLASS NAME	Estuaries
DESCRIPTION	Learn about the importance of estuaries, oceans, fish and other aquatic species, marine mammals, and the hazards of marine debris.
OBJECTIVES	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.
MATERIALS	Marine Science Center displays, seine net
INSTRUCTOR	MSC

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Aquatic Ecosystems
CLASS NAME	Estuaries - Adopt-An-Estuary
DESCRIPTION	Students do hands-on activities that teach them about manatees, marine mammals, estuaries, springs and re-charge areas.
OBJECTIVES	Students learn about estuaries and springs, and their importance to manatees, marine mammals and the health of our aquatic environment.
MATERIALS	Adopt-An-Estuary Curriculum Guide & Activities, seine net
INSTRUCTOR	MSC, NR

Method of Delivery

- | | | | |
|---|---|---|---|
| <input type="checkbox"/> Tour | <input checked="" type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Aquatic Ecosystems
CLASS NAME	Estuary Seine Netting
DESCRIPTION	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.
OBJECTIVES	
MATERIALS	Seine nets, buckets, sieve
INSTRUCTOR	LM, MSC

Method of Delivery

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> Tour | <input checked="" type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Aquatic Ecosystems
CLASS NAME	Waterbody Paddle
DESCRIPTION	Explore various waterways, shorelines and the associated flora and fauna. Introduction to the factors that affect water quality and quantity
OBJECTIVES	Participants will: -paddle down the St. John's River and Blue Springs. -discover hydrology of water bodies and surrounding lands. -discover effects of natural lands on water quality. -observe aquatic and shoreline flora and fauna. -explore the littoral zone.
MATERIALS	Kayak/canoe, life jacket, paddle
INSTRUCTOR	LM, MSC

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Aquatic Ecosystems
CLASS NAME	Wetland Hike
DESCRIPTION	Introduction to wetlands and their flora and fauna.
OBJECTIVES	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. -observe and identify aquatic macroinvertebrates. -discuss wetland ecology.
MATERIALS	Dip nets, buckets, magnifying glasses, microscopes, dissecting equipment, petri dishes, tables
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Coastal Ecosystems
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Decomposition
CLASS NAME	Dead Log Condos
DESCRIPTION	Introduction to the process of tree decomposition and the carbon cycle.
OBJECTIVES	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. -use magnifying tools. -examine dead logs and the organisms that live in them.
MATERIALS	Pavilion with tables, samples of decomposing logs, microscopes, magnifying glasses, dissecting equipment, clippers, petri dishes, Styrofoam trays, large white paper sheets.
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Eco Walk
CLASS NAME	Eco Walk
DESCRIPTION	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.
OBJECTIVES	
MATERIALS	Lighthouse Point Park
INSTRUCTOR	MSC

Method of Delivery

- | | | | |
|--|---|---|--|
| <input checked="" type="checkbox"/> Tour | <input checked="" type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Fire Ecology
CLASS NAME	Fire Ecology
DESCRIPTION	Introduction to the importance of fire to maintain habitat health
OBJECTIVES	Students will:
MATERIALS	None
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Fish, Flora and Fauna in the Estuary
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Florida Living 101
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Land Management
CLASS NAME	GLOBE Biometry
DESCRIPTION	Introduction to measuring land cover.
OBJECTIVES	Students will: -use scientific protocol and equipment. -set up 30m x 30m study site and measure trees and ground cover using various methods and tools.
MATERIALS	GLOBE Biometry worksheet, clipboards, paper, pencils, aerial of site, UNESCO Land Cover dichotomous key, compasses, pin flags, flagging tape, clinometers, tape measures
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Oceanography
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Plant Communities
CLASS NAME	Habitat Scavenger Hunt
DESCRIPTION	Introduction to 'habitat.'
OBJECTIVES	Students will: -explain meaning of 'habitat' and its importance to all organisms. -go on hike to observe site habitats. -identify and check habitat characteristics off of provided list.
MATERIALS	Clipboards, scavenger hunt check off sheet, pencils
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Plant Communities
CLASS NAME	Neighborhoods of Plants
DESCRIPTION	Introduction to the flora, fauna and structure of natural communities and the mechanisms that affect them.
OBJECTIVES	Participants will: -go on a hike to explore different upland and wetland plant communities. -discuss why different areas have different plant communities. -dig a soil profile in an upland and a wetland habitat and compare characteristics. -discuss the land management of different plant communities, including the importance and procedure of prescribed fire. -discuss what environmental variables affect plant communities.
MATERIALS	Soil augur
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Reefs of Volusia County
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Salt, Brackish and Fresh Water Ecosystems and who lives in them
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Upland Ecosystems
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Ecology
SUBJECT	Wetland Ecosystems
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |

Environmental Management

Subject	Offering
Coastal Visitor 101	**
Vulnerable	Conservation Status
Environmental Policy	**
Gopher Tracker	Gopher Tracker
Habitat Conservation Plan	Beach Habitat Conservation Plan (for the public)
	Habitat Conservation Plan (HCP) Training
	Nighttime Operations Training
	Nighttime Operations with furniture pick-up training
	Rut raking training
	Washback Training
Land Management	Bike Hike
	Eco-Buggy Tours of Conservation Lands
	Ecosystem Reconnaissance
	Guided Hike
	Swamp Buggy Forestry and Land Management Tour
	Talk to the Trees
Land Management Techniques	**
Manatee Protection Plan	Manatees - Adult Training
Sea Turtle Lighting	Sea Turtle Lighting 101
Sea Turtles	Washback Watchers Volunteer Training
Wildlife Instructor Workshop	Schoolyard Wildlife Instructor Workshop

** Currently classes are not available in this subject



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Coastal Visitor 101
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Endangered, Threatened or Vulnerable
CLASS NAME	Conservation Status
DESCRIPTION	A guided tour of the Marine Science Center and their conservation lands.
OBJECTIVES	
MATERIALS	All items needed at the MSC
INSTRUCTOR	MSC

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Environmental Policy
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Gopher Tracker
CLASS NAME	Gopher Tracker
DESCRIPTION	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.
OBJECTIVES	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.
MATERIALS	Computer-Not necessary, but helpful tools for completing sighting reports, GPS, Camera
INSTRUCTOR	EP

Method of Delivery

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Habitat Conservation Plan
CLASS NAME	Beach Habitat Conservation Plan (for the public)
DESCRIPTION	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.
OBJECTIVES	To educate the public and interested groups about the programs and policies in place for beach driving and wildlife protection in Volusia County and to learn and understand how these two can coincide without one activity interfering with the other.
MATERIALS	pen and paper for notes (optional)
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Habitat Conservation Plan
CLASS NAME	Habitat Conservation Plan (HCP) Training
DESCRIPTION	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).
OBJECTIVES	To educate all beach workers on the basic operating guidelines for beach driving in accordance with the HCP. The training will cover a general history of the program, basic description of the sea turtles and coastal species found on Volusia beaches, describe different program components and teach them how to drive on the beach in compliance with permit requirements.
MATERIALS	Pen and paper to take notes (optional)
INSTRUCTOR	NR

Method of Delivery

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|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Habitat Conservation Plan
CLASS NAME	Nighttime Operations Training
DESCRIPTION	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.
OBJECTIVES	To educate nighttime drivers of HCP driving requirements with particular attention to how to reduce impacts to nesting and hatching sea turtles during the nesting season (May-Oct).
MATERIALS	n/a
INSTRUCTOR	NR

Method of Delivery

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|---|--|---|---|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

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|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Habitat Conservation Plan
CLASS NAME	Nighttime Operations with furniture pick-up training
DESCRIPTION	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 presentation.
OBJECTIVES	To educate nighttime drivers of HCP driving requirements with particular attention to how to reduce impacts to nesting and hatching sea turtles during the nesting season (May-Oct) in the course of their work.
MATERIALS	n/a
INSTRUCTOR	NR

Method of Delivery

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|---|--|---|---|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Habitat Conservation Plan
CLASS NAME	Rut raking training
DESCRIPTION	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.
OBJECTIVES	To teach participants how to remove all vehicle ruts in front of nests due to hatch in public driving areas in accordance with the HCP and to provide an obstacle free flat sand path to the ocean for emerging sea turtle hatchlings.
MATERIALS	n/a
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Habitat Conservation Plan
CLASS NAME	Washback Training
DESCRIPTION	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.
OBJECTIVES	Rescue at risk washback sea turtles from the sand prior to beach opening to avoid vehicular impacts. (August-Nov)
MATERIALS	n/a
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Land Management
CLASS NAME	Bike Hike
DESCRIPTION	Introduction to the trails and habitats of conservation lands.
OBJECTIVES	Participants will: -bike through the site. -examine flora and fauna of site. -examine hydrologic features of site.
MATERIALS	Helmets
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Land Management
CLASS NAME	Eco-Buggy Tours of Conservation Lands
DESCRIPTION	Introduction to the natural and cultural history and current land management practices on Volusia County Conservation Lands.
OBJECTIVES	Participants will: -ride eco-buggy through upland and wetland habitats. -discuss land management practices and goals of the site. -discuss forestry practices on site. -observe and discuss soils, hydrology, flora and fauna of site. -discuss importance and procedure of prescribed fire.
MATERIALS	N/A
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Land Management
CLASS NAME	Ecosystem Reconnaissance
DESCRIPTION	Introduction to sampling and measurement methods used by ecologists, pedologists, botanists, and meteorologists. Introduction to orienteering.
OBJECTIVES	Students will: -orient themselves using an aerial map and compass. -take various measurements in three different habitats on the site: sand hill, mesic hardwood hammock, and sand pine scrub. -discuss the importance and procedure of prescribed fire in maintaining habitats. -use various tools to take measurements and how to record data.
MATERIALS	Soil augur, soil color book, light meter, wind meter, compass, thermometer, clipboards, paper, pencils
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Land Management
CLASS NAME	Guided Hike
DESCRIPTION	Introduction to the trails and habitats of conservation lands.
OBJECTIVES	Participants will: -go on a hike through upland and wetland habitats on site. -examine the hydrology of the site and its soils. -discover the flora and fauna of the site. -discuss the procedure and importance of prescribed fire.
MATERIALS	Soil augur
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Land Management
CLASS NAME	Swamp Buggy Forestry and Land Management Tour
DESCRIPTION	Introduction to the natural and cultural history and current land management practices on Volusia County Conservation Lands.
OBJECTIVES	Participants will: -discover land management forestry and timbering goals in restoration projects on site. -discover techniques and equipment of foresters. -discuss pine tree species. -discuss pine trees as a resource. -observe and discuss soils, hydrology, flora and fauna of Lake George WMA. -discuss importance and procedure of prescribed fire.
MATERIALS	Forestry equipment
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Land Management
CLASS NAME	Talk to the Trees
DESCRIPTION	Introduction to forestry.
OBJECTIVES	Students will: -explore how trees contribute to the health of a forest habitat. -discuss the importance of trees as a resource. -discuss the work of foresters. -discuss the importance and procedure of prescribed fire.
MATERIALS	Forestry equipment
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Land Management Techniques
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Manatee Protection Plan
CLASS NAME	Manatees - Adult Training
DESCRIPTION	Two hour training on how to be a Manatee Watcher, covering manatee physiology, behavior, habitats, and threats.
OBJECTIVES	Participants learn basic manatee physiology, behavior, habitats, protective laws, and threats to their existence.
MATERIALS	PowerPoint's, folders, handouts, protocols
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Sea Turtle Lighting
CLASS NAME	Sea Turtle Lighting 101
DESCRIPTION	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
OBJECTIVES	Educate the audience on beachfront lighting and show ways to correct the problem so that more properties will chose to implement long term solutions to safely light their properties.
MATERIALS	n/a
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Sea Turtles
CLASS NAME	Washback Watchers Volunteer Training
DESCRIPTION	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 seaturtles 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. 1.5 hours total
OBJECTIVES	To supplement the HCP required Beach Safety washback surveys of public driving areas with the use of volunteers walking the beach in both non-public and public driving areas. The main objective is to rescue at risk sea turtles from dehydration and predator threats along the beach.
MATERIALS	Wear clothes comfortable for walking on the beach, a short field exercise is conducted at the end of the classroom presentation.
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Environmental Management
SUBJECT	Wildlife Instructor Workshop
CLASS NAME	Schoolyard Wildlife Instructor Workshop
DESCRIPTION	This program is designed for educators relating to the diversity of subjects on conservation lands
OBJECTIVES	Participants will: -discuss how relating natural lands and school subjects improves learning. -discover how the natural lands relate to school subjects. -discover activities for students to learn both school subjects and Florida ecology, natural science, and natural history.
MATERIALS	Copies of the Handbook to Schoolyard Plants & Animals and the Schoolyard Wildlife Activity Guide
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|---|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	

Recreation

Subject	Offering
Backpacking	Backpacking the Florida Woods
Fishing	**
Geocaching	Geo-Eco Challenge
Nature Interpretation	Nature into Art Observation Hunt and create a Hiker Poetry of the Woods
Orienteering	Navigation Contest—Compass vs. GPS
Survival	Survival in the Woods
Volusia's Trails	**
Wildlife Observation	Animal Tracking and Scat ID Beginning Birding

** Currently classes are not available in this subject



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Backpacking
CLASS NAME	Backpacking the Florida Woods
DESCRIPTION	Introduction to backpacking, hiking, and camping on the natural lands.
OBJECTIVES	Participants will: -go on a hike through upland and wetland habitats. -discuss backpacking, hiking, and camping. -set up demonstration camp and cook lunch on the trail.
MATERIALS	Backpacking, hiking, and camping equipment
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Fishing
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Geocaching
CLASS NAME	Geo-Eco Challenge
DESCRIPTION	Introduction to using the Global Positioning System (GPS) and orienteering to learn about site habitats.
OBJECTIVES	Students will: -use a GPS. -solve habitat-specific puzzles as they use the GPS to traverse the site.
MATERIALS	Hand held GPS units for teams, written ecosystem narratives with team challenge at each GPS point, prizes
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Nature Interpretation
CLASS NAME	Nature into Art
DESCRIPTION	Introduction to the uniqueness of nature on the lands.
OBJECTIVES	Participants will: -go on a hike to collect upland and wetland materials. -use upland and wetland materials to produce a creative expression.
MATERIALS	Various natural materials, including sticks, seeds, fruits, soils, grapevines, leaves, bones, scat, fish scales, feathers, and shells. Paint, paintbrushes, white glue, foam-board, string, cloth, hot glue and hot glue guns, Styrofoam trays.
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Nature Interpretation
CLASS NAME	Observation Hunt and create a Hiker
DESCRIPTION	Introduction to observation and the natural lands.
OBJECTIVES	Students will: -go on hike and practice using senses to examine the natural lands. -use senses of touch and sight to discover interesting components of land matching descriptions on provided cards. -collect said components and utilize them in a creative expression of a hiker.
MATERIALS	Pavilion with tables, wood shape samples, abstract shapes cards, texture description cards, paint color chips, paper bags, large cardboard hiker cut outs, glue
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Nature Interpretation
CLASS NAME	Poetry of the Woods
DESCRIPTION	Introduction to the diversity of the natural lands and it's relationship and components through poetry.
OBJECTIVES	Students will: -examine language in relation to the natural lands. -go on a hike and observe the site. -describe and write down their experience of the site.
MATERIALS	Samples of three types of simple poetry, clipboards, paper, pencils
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Orienteering
CLASS NAME	Navigation Contest—Compass vs. GPS
DESCRIPTION	Introduction to navigation with compasses and GPS.
OBJECTIVES	Students will: -discover the importance of navigation tools in regard to forestry. -divide in teams and compete to compare the compass and GPS as navigation.
MATERIALS	GPS units, compasses, aerial map of class area
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Summer Camp
CLASS NAME	MSC Summer Camp
DESCRIPTION	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).
OBJECTIVES	The camp programs introduce students to the wonders of the marine environments of Volusia County and provide a basic overview of the marine and estuarine systems and the life these systems support.
MATERIALS	Seine nets, microscopes, canoes and related equipment, owl pellets, fishing gear
INSTRUCTOR	MSC

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Survival
CLASS NAME	Survival in the Woods
DESCRIPTION	Introduction on the use of the natural features of wild lands for emergencies.
OBJECTIVES	Participants will: -discuss preparedness and wilderness survival. -discuss emergency necessities. -discuss the effects of attitude and other variables on survival. -practice lighting and extinguishing fires using minimal materials and finding shelter. -discuss the basics of wilderness survival. -discuss what survival basics the littoral zone and other wetland habitats fulfill, and their importance in human woodland survival.
MATERIALS	Instructor supplies
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Volusia's Trails
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Wildlife Observation
CLASS NAME	Animal Tracking and Scat ID
DESCRIPTION	Introduction to finding and identifying animal signs.
OBJECTIVES	Students will: <ul style="list-style-type: none">- recognize various animal tracks.-create plaster casts of animal tracks.-recognize various types of animal scat.-discuss how scat can be used to learn more about an animal.-discuss the procedure and importance of prescribed fire in maintaining animal habitat.
MATERIALS	Plaster track casts of VCCL wildlife, scat examples of VCCL wildlife, plaster of Paris, plastic cups, Styrofoam trays
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Recreation
SUBJECT	Wildlife Observation
CLASS NAME	Beginning Birding
DESCRIPTION	Introduction to bird-watching and bird-watching techniques.
OBJECTIVES	Participants will: -discover various techniques for bird-watching. -learn to use binoculars and other bird-watching equipment. -ride eco-buggy to various upland and wetland habitats to look for birds. -discuss procedure and importance of prescribed fire in maintaining bird habitat. -practice bird identification.
MATERIALS	Binoculars, bird identification guides
INSTRUCTOR	LM

Method of Delivery

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|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	

Sustainability

Subject	Offering
Coastal Resilience	**
Florida Friendly Landscaping	**
Green Volusia	Library Backpacks
Monofilament Recycling	*
Water Conservation	**

** Currently classes are not available in this subject



Environmental Management Education Offerings

TOPIC	Sustainability
SUBJECT	Coastal Resilience
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Sustainability
SUBJECT	Florida Friendly Landscaping
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Sustainability
SUBJECT	Green Volusia
CLASS NAME	Library Backpacks
DESCRIPTION	<p>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.</p> <p>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 the backpacks are checked out of the library.</p>
OBJECTIVES	Library patrons will be given numerous ideas and tips on how to conserve natural resources including water and energy. The backpacks are also designed to provide the public with ways they can save money.
MATERIALS	Items to be returned: 5 Books, DVD, flash cards, Kill-A-Watt meter, energy and conservation wheels. Items participants get to keep: Green Volusia bag, activity books, faucet aerators, shower coach timer, Green Volusia book mark and pencil, waterwise landscape brochure, and a sustainability challenge.
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|--|---|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input checked="" type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Sustainability
SUBJECT	Monofilament Recycling
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Sustainability
SUBJECT	Water Conservation
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	

Water

Subject	Offering
Fertilizer and Water Quality	**
Florida's Aquifer	**
Freshwater Saltwater Interface	**
Role of Nutrients in Water Bodies	**
Springs Ecology	**
Water Cycle	GLOBE Atmosphere with Cloud Art
Water Cycle-Clouds to Wetlands	Water Cycle—Clouds to Wetlands
Water Quality Monitoring	Water Quality Testing
Why do we test the water?	Marine Ecosystems Exploration

** Currently classes are not available in this subject



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Fertilizer and Water Quality
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

- | | |
|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Florida's Aquifer
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Freshwater Saltwater Interface
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Role of Nutrients in Water Bodies
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Springs Ecology
CLASS NAME	At this time, a class has not been developed for this subject.
DESCRIPTION	
OBJECTIVES	
MATERIALS	
INSTRUCTOR	

Method of Delivery

- | | | | |
|----------------------------------|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Water Cycle
CLASS NAME	GLOBE Atmosphere with Cloud Art
DESCRIPTION	Introduction to the water cycle and weather.
OBJECTIVES	Students will: -discuss the water cycle and how it affects the climate. -discuss the importance of the water cycle and how it affects the lands. -observe and identify clouds.
MATERIALS	Water cycle poster, cloud ID poster, paper, paintbrushes, paper plates, black and white paint, cups, water
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Water Cycle-Clouds to Wetlands
CLASS NAME	Water Cycle—Clouds to Wetlands
DESCRIPTION	Introduction to clouds and the water cycle.
OBJECTIVES	Students will: -discuss how clouds form and the role they play in the water cycle. -explain how clouds foretell the weather. -observe and identify clouds.
MATERIALS	Water cycle poster, cloud ID poster, paper, black and white paint, brushes
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Water Quality Monitoring
CLASS NAME	Water Quality Testing
DESCRIPTION	Introduction to water quality and water quality testing.
OBJECTIVES	Students will: -discuss factors that affect water quality. -discover the different methods for water quality testing. -discover what each method measures about the water. -discuss why knowing various facets of water quality is important. -practice testing water quality.
MATERIALS	Secchi disk, turbidity tube, water sampling bucket, pH test kit, pH paper, dissolved oxygen test kit, wind meter, compass, safety glasses, latex gloves
INSTRUCTOR	LM, PC

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Water
SUBJECT	Why do we test the water?
CLASS NAME	Marine Ecosystems Exploration
DESCRIPTION	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.
OBJECTIVES	
MATERIALS	Water testing equipment, buckets, seine and plankton net, ID charts and laminated photos and ID cards
INSTRUCTOR	MSC

Method of Delivery

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> Tour | <input checked="" type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	

Zoology

Subject	Offering
Aquatic Animals	Aquatic Critters Flippers, Webs and Claws Manatees - 3rd - 5th Grade Class Manatees - Adult Class Manatees - Marine Science Center Summer Camp Manatees - Pre-K Classes Dissection Marine Mammals - Adult Classes Marine Mammals - K - 5th Grade Activity Hike Mollusks and their Shells Old Florida Cane Pole Fishing Super Sharks Teeny Critters of the Pond
Birds	Meet the Florida Scrub Jay Scrub Jay Puppets Shore Birding Hike Talking Turkey Hike Wild About Birds—Live Bird-of-Prey Encounters
Florida Turtles and Tortoises	Florida Turtles- Their Biology and Ecology Gopher Tortoise Survey
Insects Around Us	Ant Lunch and Ants for Lunch Butterflies- Flying Flowers of Central Florida Insects in Various Habitats Insects-Good or Bad? Leaf Litter Critters Teeny Tiny Scavenger Hunt
Owl Pellet Dissection	Raptors Live
Sea Turtles	Master Naturalist Sea Turtle Class Sea turtles of Volusia County (for teachers)
Signs of Wildlife	Reading the Signs of Wildlife
Snakes	Florida Critters That Deserve Our Respect Venomous Snake Walking Sticks



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Aquatic Critters
DESCRIPTION	Introduction to aquatic faunal organisms, including benthic macroinvertebrates.
OBJECTIVES	Participants will: -discover wetland habitats. -use scientific equipment to collect specimens of aquatic organisms. -identify specimens and discover their effects on the wetland habitat.
MATERIALS	Dip nets, buckets, magnifying equipment, tables
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Flippers, Webs and Claws
DESCRIPTION	A guided tour of the Marine Science Center and how they approach the needs of the creatures and the ecosystem they live in.
OBJECTIVES	
MATERIALS	Sea Turtles and Sea Turtle Specimens, Box turtle and Box turtle carapace River Turtles, Pictures of claws flippers and webbed feet.
INSTRUCTOR	MSC

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Manatees - 3rd - 5th Grade Class
DESCRIPTION	Basic information on manatees, how and why they live here, why they are important, and hazards to their existence.
OBJECTIVES	Participants learn basic facts about manatees, how and where they live, and threats such as entanglement and boat strikes.
MATERIALS	Manatee skull, mini-bins, and activities
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Manatees - Adult Class
DESCRIPTION	Learn the basic facts about manatees, their behavior and their habitats.
OBJECTIVES	Participants learn basic manatee physiology, behavior and threats to their existence.
MATERIALS	PowerPoint, hand-outs
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input checked="" type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Manatees - Marine Science Center Summer Camp
DESCRIPTION	Canoe in Mosquito Lagoon and Blue Spring and learn about manatees, photograph them, time manatee breaths, and sketch scar patterns.
OBJECTIVES	Students learn manatee physiology, behavior, manatee habitat, and hazards from boat strikes.
MATERIALS	stop watch, disposable underwater cameras, scar pattern sheets, clipboards, waterproof paper, manatee scar photos
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Manatees - Pre-K Classes
DESCRIPTION	Basic information on manatees, how and why they live here, and why they are important.
OBJECTIVES	Students learn basic facts about manatees, how and where they live, and threats to their existence.
MATERIALS	Manatee story book, lg. plush manatee, skull, coloring book/activities
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Marine Cephalopod Encounter-Squid Dissection
DESCRIPTION	This program includes a pre test 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.
OBJECTIVES	
MATERIALS	Frozen Squid (Thawed out), Trays, lab scissors, tweezers and probes. Work sheets and Id sheet, Power Point
INSTRUCTOR	MSC

Method of Delivery

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Marine Mammals - Adult Classes
DESCRIPTION	Beginning to intermediate level instruction on marine mammals, their physiology, behavior, and habitats.
OBJECTIVES	Participants learn marine mammals common to our area, their physiology, behavior, habitat, and threats to their existence.
MATERIALS	PowerPoint, dolphin and manatee skulls, mini-bins, hand-outs
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Marine Mammals - K - 5th Grade Activity
DESCRIPTION	Short 20 minute activity teaching students about marine mammals.
OBJECTIVES	Students learn to identify marine mammals and their characteristics.
MATERIALS	Marine mammal activity
INSTRUCTOR	NR

Method of Delivery

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input checked="" type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Mollusks and Their Beautiful Shells Wading Hike
DESCRIPTION	Introduction to mollusk biology and ecology.
OBJECTIVES	Participants will: -discuss mollusk biology and habitats. -discuss adaptations of mollusks to their habitats. -go on a hike to look for mollusks. -examine mollusk signs. -identify mollusks.
MATERIALS	N/A
INSTRUCTOR	LM

Method of Delivery

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Mollusks and their Shells
DESCRIPTION	Introduction to mollusk biology, habitat, ethnology, and mollusk shells.
OBJECTIVES	Students will: -go on wading hike to observe and identify mollusks. -discover how the habitat affects what mollusks are found in an area. -find and identify signs of mollusks.
MATERIALS	Mollusk ID book
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Old Florida Cane Pole Fishing
DESCRIPTION	Introduction to the ecology and importance of fish using old-fashioned cane poles.
OBJECTIVES	Participants will: -explore the wetland and shoreline habitat. -discuss the importance of water quality for fish. -discuss the importance of the lake watershed for water quality. -discover how to fish with a cane pole. -practice catching and identifying fish.
MATERIALS	Cane poles and tackle, bait
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

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| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Super Sharks
DESCRIPTION	Completion of the activity work sheet and hands on experience with shark specimens. There will also be time to explore the Marine Science Center.
OBJECTIVES	
MATERIALS	Shark Jaws and other shark specimens, Side deck with the shark jaws in the case or classroom and a Power Point, Activity Work sheet
INSTRUCTOR	MSC

Method of Delivery

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| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Aquatic Animals
CLASS NAME	Teeny Critters of the Pond
DESCRIPTION	Introduction to wetland flora and fauna.
OBJECTIVES	Students will: -use dip nets to collect aquatic macroinvertebrates that in wetlands. -use magnification tools to observe and identify specimens.
MATERIALS	Macroinvertebrate ID cards, dip nets, white buckets, microscopes, magnifying glasses, petri dishes, forceps
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Birds
CLASS NAME	Meet the Florida Scrub Jay
DESCRIPTION	Introduction to the federally threatened Florida scrub jay.
OBJECTIVES	Students will: -explore the biology, ethnology, and ecology of the Florida scrub jay. -discuss the importance of Florida scrub jays and how they came to be threatened. -discuss what land managers are doing to preserve Florida scrub jays. -discuss the procedure and importance of prescribed fire in maintaining Florida scrub jay habitat. -watch a demonstration of banding and jay-surveying procedures.
MATERIALS	Aerial of Lyonia scrub jay territories, scrub jay banding equipment, jay call recorder
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input checked="" type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Birds
CLASS NAME	Scrub Jay Puppets
DESCRIPTION	Introduction to the threatened Florida scrub jay and its habitat.
OBJECTIVES	Students will: -observe scrub jays. -discuss scrub jay biology and ecology. -examine how the natural lands fulfill the needs of Florida scrub jays. -discuss the procedure and importance of prescribed fire in maintaining scrub jay habitat. -create display to illustrate what they learned.
MATERIALS	Socks, felt, pipe cleaners, glue guns
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Birds
CLASS NAME	Shore Birding Hike
DESCRIPTION	Introduction to shore birds.
OBJECTIVES	Participants will: -go on a hike along the shoreline. -discuss identification tips. -recognize characteristics of shore birds vs. other kinds of birds. -observe and identify shore birds.
MATERIALS	Binoculars, bird identification guides
INSTRUCTOR	LM, MSC

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Birds
CLASS NAME	Talking Turkey Hike
DESCRIPTION	Introduction to Osceola wild eastern turkey ethnology and vocalizations.
OBJECTIVES	Participants will: -discuss and practice turkey calls. -discuss the importance of wetlands as turkey habitat. -go on a hike in turkey habitat and attempt to call a turkey. -discuss and practice calls for other native animals. -discuss the role of turkeys in the ecosystem and on the lands.
MATERIALS	Turkey callers
INSTRUCTOR	LM

Method of Delivery

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|--|--|---|--|
| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Birds
CLASS NAME	Wild About Birds—Live Bird-of-Prey Encounters
DESCRIPTION	Introduction to the natural history, biology, ecology, and ethnology of birds-of-prey, and their relationship with humans.
OBJECTIVES	Participants will: <ul style="list-style-type: none">-examine the biology of birds-of-prey.-examine several species of birds-of-prey.-discover how birds-of-prey survive in the wild.-explore the habitats of birds-of-prey.-discover how they affect and are affected by humans.
MATERIALS	
INSTRUCTOR	LM, MSC

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Florida Turtles and Tortoises
CLASS NAME	Florida Turtles- Their Biology and Ecology
DESCRIPTION	Introduction to native turtles found on the natural lands.
OBJECTIVES	Participants will: -see presentation on Florida turtles. -go on hike through wetlands to look for turtles on the land.
MATERIALS	N/A
INSTRUCTOR	LM, EP

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
NR-Natural Resources
PC-Pollution Control

LM-Land Management
MSC-Marine Science Center



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Florida Turtles and Tortoises
CLASS NAME	Gopher Tortoise Survey
DESCRIPTION	Introduction to gopher tortoise habitats and biology.
OBJECTIVES	Students will: -discuss the importance of the gopher tortoise to the scrub habitat. -discuss biology and ethnology of gopher tortoises. -find, observe, measure, and record data on gopher tortoise burrows. -discuss the procedure and importance of prescribed fire in relation to gopher tortoises and their habitat.
MATERIALS	Gopher tortoise burrow poster, GPS units, compasses, clipboards, paper, pencils
INSTRUCTOR	LM, EP

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Insects Around Us
CLASS NAME	Ant Lunch and Ants for Lunch
DESCRIPTION	Introduction to the ecology and feeding behavior of ants and ant lions in the scrub.
OBJECTIVES	Students will: -use scientific method to design, set up, and carry out an experiment on ant feeding. -observe and discuss the hunting techniques and biology of ant lions. -discuss the relationship between these animals and the porous scrub soil. -discuss the procedure and importance of prescribed fire in maintaining scrub and ant habitat.
MATERIALS	Small amounts of bird seed, meat and cake sprinkles, magnifying glasses, plastic spoons, plastic cups, petri dishes
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Insects Around Us
CLASS NAME	Butterflies- Flying Flowers of Central Florida
DESCRIPTION	Introduction to native butterflies on the natural lands.
OBJECTIVES	Participants will: -see photos of local butterfly species. -go on a hike to observe butterflies, caterpillars, host plants and nectar plants on the site. -discuss the importance of wetland flowers and host plants to butterflies. -discuss the procedure and importance of prescribed fire in maintaining butterfly habitat.
MATERIALS	Photographs of butterflies, close-focusing binoculars, butterfly field guides
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

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|-----------------------------|---------------------------|
| EP-Environmental Permitting | LM-Land Management |
| NR-Natural Resources | MSC-Marine Science Center |
| PC-Pollution Control | |



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Insects Around Us
CLASS NAME	Insects in Various Habitats
DESCRIPTION	Introduction to the insects found in different habitats.
OBJECTIVES	Students will: -use various traps to capture and examine various insects. -practice netting techniques to capture insects. -use magnifying tools to examine and identify insects. -examine the effects of habitats on insect biodiversity. -discuss the procedure and importance of prescribed fire on insect habitat.
MATERIALS	Insect traps installed in different habitats, insect nets, petri dishes
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Insects Around Us
CLASS NAME	Insects-Good or Bad?
DESCRIPTION	Introduction to insects of Florida, including discussion of invasive non-native insects, with emphasis on benefits and problems caused by insects.
OBJECTIVES	Participants will: -inspect insect traps in upland and wetland habitats. -net insect specimens in upland and wetland habitats. -identify insects and explore insect biodiversity on the lands. -discuss procedure and importance of prescribed fire for insect habitat. -discuss benefits and problems insects cause. -discuss invasive non-native insects and problems they cause in Florida.
MATERIALS	Insect traps, nets, specimen collection, magnifying equipment, tables
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Insects Around Us
CLASS NAME	Leaf Litter Critters
DESCRIPTION	Introduction to select invertebrates found in leaf litter on the natural lands.
OBJECTIVES	Students will: -examine biology and ecology of earthworms, pillbugs, and slugs. -observe select invertebrates. -use scientific method to set up experiments to compare characteristics of select invertebrates.
MATERIALS	Pavilion with tables, photo examples of leaf litter macroinvertebrates, plastic baggies, large white paper, microscopes, magnifying glasses, forceps, Styrofoam trays, Berlese funnel
INSTRUCTOR	LM

Method of Delivery

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| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Insects Around Us
CLASS NAME	Teeny Tiny Scavenger Hunt
DESCRIPTION	Introduction to microhabitats.
OBJECTIVES	Students will: -use scientific tools to collect specimens and observe them under magnification. -classify specimens: animal, vegetable, or mineral; and as organic or inorganic.
MATERIALS	Pavilion with tables, small cups, forceps, white paper, petri dishes
INSTRUCTOR	LM

Method of Delivery

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| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Owl Pellet Dissection
CLASS NAME	Raptors Live
DESCRIPTION	This program includes a raptor presentation with live birds of prey, a pre test 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.
OBJECTIVES	
MATERIALS	Live Owls, Specimens and Photos and ID and dissection sheets from Raptors, Power Point, Owl Pellets, Trays , tweezers and picks,
INSTRUCTOR	MSC

Method of Delivery

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Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Sea Turtles
CLASS NAME	Master Naturalist Sea Turtle Class
DESCRIPTION	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.
OBJECTIVES	To provide local understanding of sea turtle programs in Volusia County to Master Naturalist participants of the UF IFAS program.
MATERIALS	Pen and paper for notes (optional)
INSTRUCTOR	NR

Method of Delivery

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| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input checked="" type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input checked="" type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
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PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Sea Turtles
CLASS NAME	Sea turtles of Volusia County (for teachers)
DESCRIPTION	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.
OBJECTIVES	To "teach the teachers" who are participating in a County initiated environmental program led by Louise Chapman.
MATERIALS	pen and paper for notes (optional)
INSTRUCTOR	NR

Method of Delivery

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| <input type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input checked="" type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
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PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Signs of Wildlife
CLASS NAME	Reading the Signs of Wildlife
DESCRIPTION	Introduction to animal signs.
OBJECTIVES	Participants will: -examine animal tracks and scat. -discuss what information can be deduced from animal signs. -go on a hike and observe and identify animal signs. -discuss procedure and importance of prescribed fire for animal habitat. -recognize the importance of water bodies for wildlife. -create plaster casts of animal tracks.
MATERIALS	Plaster of Paris, plastic cups, water, Styrofoam trays, plaster track collection
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Snakes
CLASS NAME	Florida Critters That Deserve Our Respect
DESCRIPTION	Introduction to snakes, especially the water moccasin, that can be found on the natural lands.
OBJECTIVES	Participants will: -discuss water moccasin and other snake biology, ecology, and ethnology. -observe live snakes. -debunk common water moccasin and snake myths and misconceptions. -discuss the procedure and importance of prescribed fire in maintaining snake habitat, and how snakes survive fires. -go on a hike to look for wild snakes in upland and wetland areas. -compare and contrast the behavior of upland snakes and wetland snakes such as the water moccasin.
MATERIALS	Pavilion with tables
INSTRUCTOR	LM

Method of Delivery

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| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting	LM-Land Management
NR-Natural Resources	MSC-Marine Science Center
PC-Pollution Control	



Environmental Management Education Offerings

TOPIC	Zoology
SUBJECT	Snakes
CLASS NAME	Venomous Snake Walking Sticks
DESCRIPTION	Introduction to the water moccasin and other venomous snakes on the natural lands.
OBJECTIVES	Students will: -use identification guides to discover the venomous snakes that can be found on the natural lands. -examine differences between venomous snakes and learn how to identify them. -discuss the procedure and importance of prescribed fire for snake habitat and how snakes survive fires. -create a model of a venomous snake.
MATERIALS	Pavilion with tables, sticks shaped like snakes, venomous snakes of Florida brochure, paint, paintbrushes
INSTRUCTOR	LM

Method of Delivery

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| <input checked="" type="checkbox"/> Tour | <input type="checkbox"/> K-12 Field Trip | <input type="checkbox"/> Brochure/Print | <input type="checkbox"/> Event |
| <input type="checkbox"/> Program | <input type="checkbox"/> Speakers | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Volunteer/Project |

Instructor Legend

EP-Environmental Permitting
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MSC-Marine Science Center

Events

Subject	Offering
Aquatic Ecosystems	Blue Spring Water Festival
Coastal Ecosystems	Hands Across the Lagoon
Manatees	Blue Spring Manatee Festival
	Spruce Creek Festival
	Turtlefest Event
	Volusia County Fair
	Wings on the Wind
Scrub Jay	Scrub Jay Festival



Environmental Management Events

TOPIC	Ecology
SUBJECT	Aquatic Ecosystems
EVENT	Blue Spring Water Festival
MATERIALS	Display boards, activities, mini-bins, hand-outs
DESCRIPTION	Highlights manatees, Blue Spring, spring and springshed ecology.
OBJECTIVES	Public learns about manatees, marine mammals, spring and springshed ecology, and re-charge areas.
ACTIVITY	NR



Environmental Management Events

TOPIC	Ecology
SUBJECT	Coastal Ecosystems
EVENT	Hands Across the Lagoon
MATERIALS	Display boards, hand-outs
DESCRIPTION	Information on why the Indian River Lagoon is so important to manatees, and the connections between seagrass and many lagoon species.
OBJECTIVES	Participants will recognize the important relationships between, manatees, seagrass, dolphins, fish, birds, and many other lagoon species, and how pollution may be threatening the ecosystem.
ACTIVITY	NR



Environmental Management Events

TOPIC	Zoology
SUBJECT	Manatees
EVENT	Blue Spring Manatee Festival
MATERIALS	Display boards, activities, mini-bins, hand-outs
DESCRIPTION	Highlights manatees, Blue Spring, and springs ecology.
OBJECTIVES	Public learns about manatees, marine mammals, springs ecology, and marine debris.
ACTIVITY	NR



Environmental Management Events

TOPIC	Zoology
SUBJECT	Manatees
EVENT	Spruce Creek Festival
MATERIALS	Display boards, activities, mini-bins, hand-outs
DESCRIPTION	Highlights manatees, marine mammals, rivers and estuaries, and marine debris.
OBJECTIVES	Public learns about manatees, marine mammals, riverine and coastal ecology, and marine debris.
ACTIVITY	NR



Environmental Management Events

TOPIC	Zoology
SUBJECT	Manatees
EVENT	Turtlefest Event
MATERIALS	Display boards, activities, mini-bins, hand-outs
DESCRIPTION	Highlights manatees, marine mammals and coastal ecology.
OBJECTIVES	Public learns about manatees, marine mammals, coastal ecology, and marine debris.
ACTIVITY	NR



Environmental Management Events

TOPIC	Zoology
SUBJECT	Manatees
EVENT	Volusia County Fair
MATERIALS	Display boards, activities, mini-bins, hand-outs
DESCRIPTION	Highlights manatees, marine mammals, springs and estuaries, and marine debris.
OBJECTIVES	Public learns about manatees, marine mammals, spring and coastal ecology, and marine debris.
ACTIVITY	NR



Environmental Management Events

TOPIC	Zoology
SUBJECT	Manatees
EVENT	Wings on the Wind
MATERIALS	Display boards, activities, mini-bins, hand-outs
DESCRIPTION	Highlights manatees, marine mammals and coastal ecology.
OBJECTIVES	Public learns about manatees, marine mammals, coastal ecology, and marine debris.
ACTIVITY	NR



Environmental Management Events

TOPIC	Zoology
SUBJECT	Scrub Jay
EVENT	Scrub Jay Festival
MATERIALS	Display boards, activities, mini-bins, hand-outs
DESCRIPTION	Highlights Scrub Jays and the scrub jay environment
OBJECTIVES	Public will learn about the scrub jay habitat.
ACTIVITY	LM

