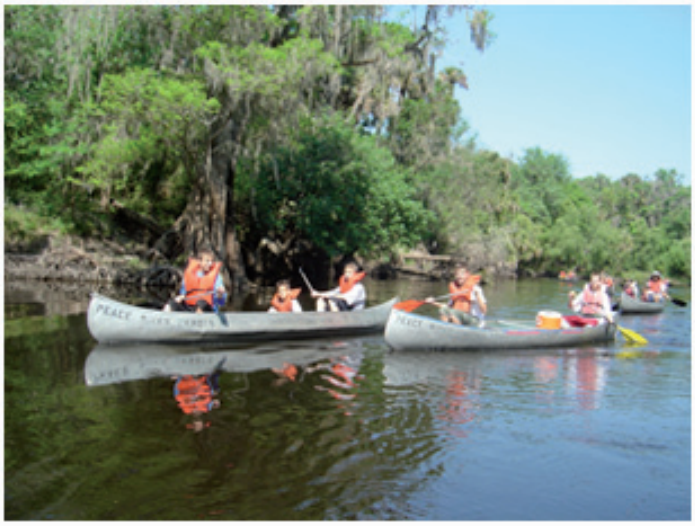
Build-A-Field Trip

A Division of Florida Safari Adventures

5 DAY TRIP - A FLORIDA EXPERIENCE

4th - 12th Grade **Wetland Ecology, Mangrove Exploration, Marine Mammal**



- **Marine Mammal Ecology**
- **Aquifers Study**
- **Florida Geologic History**
- **Fossil Hunting**
- **Canoe Peace River**

CALL **954-772-7800** or E-MAIL **info@BuildAFieldtrip.com**

1925 NE 45th Street, Ste. 132, Fort Lauderdale, FL 33308

Build-A-Field Trip

A Division of Florida Safari Adventures

5 DAY TRIP - A FLORIDA EXPERIENCE

4th - 12th Grade **Comparative Ecosystems and Marine Ecology**

Our Florida Experience begins as we head west along Alligator Alley, discovering the changing sights as we pass through the Everglades system, the “life-blood” of the state. We’ll spot alligators in their fresh water habitat while making our way to Sarasota and begin our exploration of Mote Marine Laboratory. At the research center and throughout the exhibits, we begin to investigate the marine environment and take a behind the scenes tour, learning about the plight of the West Indian manatee. Equipped with our new knowledge, we depart for Crystal River, arriving at the Marine Science Station in time to check in to the bunk bed style dormitory and get ready for dinner. After our hearty meal, we have the opportunity to learn about the Florida aquifer system as part of a unique aquifer class, helping us to understand how the delicate balance of fresh water is so important to the manatees.

After a hearty breakfast, we depart for Homosassa Springs and begin our manatee awareness program. The program covers the many facets of manatees in Florida including manatee history, habitat, behavior, anatomy, aw well as the laws affecting these gentle giants and culminates with swimming with the manatees. Manatees, like humans are susceptible to cold and hypothermia and cannot survive for extended periods when water temperatures fall below 68 degrees Fahrenheit. The water in the springs is a constant 72 degrees Fahrenheit providing a warm water escape from the cold gulf waters. Don’t worry- all participants swimming with manatees will be suited with a complete wetsuit. After our swimming experience, we return to Marine Science station where we will refuel with a picnic lunch. For our next adventure, we board a boat, grab our snorkel gear and begin our drift snorkel along the Rainbow River. While drifting down the crystal clear waters, (wearing a wet suit and snorkel gear), we will see a flourishing ecosystem of aquatic vegetation, a wide variety of fish, numerous turtles, and even fossilized shark teeth blowing from spring vents that dot the river bed. Our full day comes to a beautiful close as we watch the sunset over the Gulf of Mexico, returning to the Marine Science Station for dinner and a well-deserved rest.

Armed with a new appreciation for this gentle and endangered mammal, we leave the manatees behind for the next phase of our exploration of Florida’s unique springs. When we arrive in the town of Gainesville, we will head straight to the Florida Museum of Natural History to discover the hall of Florida fossils, the butterfly rainforest, waterways and wildlife and south Florida people and

CALL **954-772-7800** or E-MAIL **info@BuildAFieldtrip.com**

1925 NE 45th Street, Ste. 132, Fort Lauderdale, FL 33308

Build-A-Field Trip

A Division of Florida Safari Adventures

5 DAY TRIP - A FLORIDA EXPERIENCE

4th - 12th Grade **Comparative Ecosystems and Marine Ecology**

environments exhibits and much more. After exploring the museum, we travel to Devil's Mill Hopper State Geological Site for lunch and investigation of this 120 feet deep and 500 feet across sinkhole. We have the opportunity to travel down a half mile via a 232 step stairway to the bottom of the sink. After our close-up look at the sinkhole, we head south and arrive in Ocala to explore the headwaters of the beautiful Silver Springs, the largest artesian spring formation in the world. We will view the underground springs from glass bottom boats, where we can catch a glimpse of the life below the surface and see fish, shellfish, turtles and alligators in water that is up to 80 feet deep. We'll explore the dry ground as well and experience the natural habitats of Florida, participating in one of the many wildlife shows including Birds of Prey, Snakes and Reptiles. Leaving Ocala, we head south to the Sebring area and our evening's destination, Camp Sparta. In our cabins, we prepare for a full evening of activities, including a genuine Native American campfire, story telling and our ever-popular Spirit Creature game.

The next morning we will follow in the footsteps of Captain Francis LeBaron as we set out to discover fossil wonders of our state, much as he may have done in 1881! The trip will begin at Highlands Hammock State Park, one of Florida´s oldest parks, opening to the public in 1931. Here, we will learn about the Civilian Conservation Corps (CCC) and all the work they did throughout America's parks. While walking on a board walk, we explore another of Florida's beautiful and vital ecosystems, a cypress swamp. As we travel through the pristine clear water among the Cypress trees, we discover the sights and sounds of this important habitat. Our next stop is Archbold Biological Research Station, where students will investigate the endangered Florida scrub ecosystem and its endemic species, including the captivating scrub jay- a bird with great biological significance and a great personality! After a hearty lunch, we will travel to Joshua Creek, known for its wide variety of fossils and authentic Native American artifacts. This creek runs next to a Calusa Indian mound and it is not uncommon to find beads and an occasional arrowhead here. We'll learn how to hone our fossil hunting skills, finding ancient treasures. Many sharks teeth and perhaps a manatee rib bone later, we'll then travel to our campsite, settle into our cabins, stow our treasures and enjoy a great "home cooked" meal topped off with a campfire and s'mores!

After breaking camp the next morning, we'll whisk away for the core of Bone Valley, traveling through

CALL **954-772-7800** or E-MAIL **info@BuildAFieldtrip.com**

1925 NE 45th Street, Ste. 132, Fort Lauderdale, FL 33308

Build-A-Field Trip

A Division of Florida Safari Adventures

5 DAY TRIP - A FLORIDA EXPERIENCE

4th - 12th Grade **Comparative Ecosystems and Marine Ecology**

phosphate mining country to Arcadia and our canoe trip down the Peace River! After our canoeing skill and safety lesson, we'll launch our canoes into the meandering river, where we're bound to spot turtles and many varieties of native birds. Students will discover the real Florida of the past as they use specially designed tools to screen through black phosphate pebbles on the sandbars and river bottom. The diversity of fossils is amazing- shark teeth, sting ray mandibles, three toed horse teeth, camel teeth, dugong ribs and mastodon molars are some of the treasures to be found. Following a picnic lunch, we'll head home. The bus will become a "traveling museum", as we identify and categorize our finds...and learn to make shark tooth jewelry. Stories of this unique Florida experience will resonate long after the bus returns home.

PRICING:

- **$850.00 per student**
- **Based on a minimum of 36 students and a maximum of 48 students**
- **Based on Broward county departure**
- **Includes coach transportation, instruction, equipment, lodging and meals**

CALL **954-772-7800** or E-MAIL **info@BuildAFieldtrip.com**

1925 NE 45th Street, Ste. 132, Fort Lauderdale, FL 33308

Build-A-Field Trip

A Division of Florida Safari Adventures

5 DAY TRIP - A FLORIDA EXPERIENCE

EDUCATIONAL OBJECTIVES

Sunshine State Standards following Grades 4-12

Students will:

- understand how building projects affect both people living in the Everglades area and the natural KLOE system

SC.7.E.6.6 Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.

SC.8.N.4.1 Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.

SS.8.G.5.2 Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history.

SC.912.L.17.19 Describe how different natural resources are produced and how their rates of use and renewal limit availability.

SC.912.L.17.20 Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

SS.912.G.5.6 Analyze case studies to predict how a change to an environmental factor can affect an ecosystem.

SS.912.G.5.6 Analyze case studies to predict how a change to an environmental factor can affect an ecosystem.

-understand some characteristics of flora and fauna observed in the springs ecosystem and how they are structurally and functionally similar and different

SC.5.L.14.2 Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -- some with internal skeletons others with exoskeletons -- while some plants have stems for support.

SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

SC.6.L.15.1 Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.

SC.912.L.17.6 Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.

-learn how a changes in water and habitat affect the manatee's ability to reproduce and thrive and why they have become endangered

-learn how a change in water levels can affect an organism's ability to reproduce and thrive in this ecosystem

SC.7.E.6.6 Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.

SC.8.N.4.1 Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.

SS.8.G.5.2 Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history.

SC.912.L.17.19 Describe how different natural resources are produced and how their rates of use and renewal limit availability.

SC.912.L.17.20 Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

SS.912.G.5.6 Analyze case studies to predict how a change to an environmental factor can affect an ecosystem.

-understand the link between decreased water levels in the springs and human consumption of fresh water, understand the link between human action and natural resource depletion/ endangered animals

SS.5.C.2.5 Identify ways good citizens go beyond basic civic and political responsibilities to improve government and society.

SS.6.G.3.2 Analyze the impact of human populations on the ancient world's ecosystems.

SC.8.N.4.2 Explain how political, social, and economic concerns can affect science, and vice versa.

SS.8.G.5.1 Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.

SC.912.L.17.11 Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.

SC.912.L.17.12 Discuss the political, social, and environmental consequences of sustainable use of land.

SC.912.L.17.13 Discuss the need for adequate monitoring of environmental parameters when making policy decisions.

SC.912.L.17.15 Discuss the effects of technology on environmental quality.

SC.912.L.17.16 Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.

SC.912.L.17.18 Describe how human population size and resource use relate to environmental quality.

SS.912.C.2.4 Evaluate, take, and defend positions on issues that cause the government to balance the interests of individuals with the public good.

SS.912.C.2.8 Analyze the impact of citizen participation as a means of achieving political and social change.

SS.912.G.2.5 Use geographic terms and tools to analyze case studies of debates over how human actions modify a selected region.

SS.912.G.3.3 Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in Florida, the United States, and the world.

SS.912.G.5.2 Analyze case studies of how changes in the physical environment of a place can increase or diminish its capacity to support human activity.

SS.912.G.5.4 Analyze case studies of how humans impact the diversity and productivity of ecosystems.

-learn that organisms living in the fresh water springs thrive there because of its unique qualities, which include a constant temperature

SC.7.L.15.2 Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.

SC.7.L.15.3 Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.

-understand the force and predictability of the underground water source that feeds the Springs and keeps them at a constant temperature

SS.912.G.3.5 Use geographic terms and tools to explain how hydrology influences the physical character of a place.

-understand what influences the water cycle in South Florida and how this relates both to them and the bigger picture

SC.7.E.6.6 Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.

SC.8.N.4.1 Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.

SS.8.G.5.1 Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.

SS.8.G.5.2 Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history.

SC.912.E.7.8 Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.

SC.912.L.17.11 Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.

-learn the basic features of Karst topography, sinkholes for example- how and why they are formed and how to recognize them

SC.6.E.6.1 Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.

SC.6.E.6.2 Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.

SC.7.E.6.2 Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).

SC.912.E.6.2 Connect surface features to surface processes that are responsible for their formation.

SC.912.E.6.4 Analyze how specific geologic processes and features are expressed in Florida and elsewhere.

SC.912.E.6.5 Describe the geologic development of the present day oceans and identify commonly found features.

- identify and understand basic aquatic organisms and their unique structures and functions and how these are related to environmental adaptations, with a focus on those found in springs habitats

SC.5.L.14.2 Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -- some with internal skeletons others with exoskeletons -- while some plants have stems for support.

SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

SC.6.L.15.1 Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.

SC.7.L.16.1 Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.

SC.7.L.15.2 Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.

SC.7.L.15.3 Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.

SC.912.L.15.7 Discuss distinguishing characteristics of vertebrate and representative invertebrate phyla, and chordate classes using typical examples.

SC.912.L.17.6 Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.

SC.912.L.17.7 Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.

- understand the impact individuals, cultures and group organizations have had on the preservation of natural areas and understand the significance of human actions, including their own, in the protection of natural resources

SS.5.C.2.5 Identify ways good citizens go beyond basic civic and political responsibilities to improve government and society.

SS.6.G.3.2 Analyze the impact of human populations on the ancient world's ecosystems.

SC.8.N.4.2 Explain how political, social, and economic concerns can affect science, and vice versa.

SS.8.G.5.1 Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.

SC.912.L.17.11 Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.

SC.912.L.17.12 Discuss the political, social, and environmental consequences of sustainable use of land.

SC.912.L.17.13 Discuss the need for adequate monitoring of environmental parameters when making policy decisions.

SC.912.L.17.15 Discuss the effects of technology on environmental quality.

SC.912.L.17.16 Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.

SC.912.L.17.18 Describe how human population size and resource use relate to environmental quality.

SS.912.C.2.4 Evaluate, take, and defend positions on issues that cause the government to balance the interests of individuals with the public good.

SS.912.C.2.8 Analyze the impact of citizen participation as a means of achieving political and social change.

SS.912.G.2.5 Use geographic terms and tools to analyze case studies of debates over how human actions modify a selected region.

SS.912.G.3.3 Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in Florida, the United States, and the world.

SS.912.G.5.2 Analyze case studies of how changes in the physical environment of a place can increase or diminish its capacity to support human activity.

SS.912.G.5.4 Analyze case studies of how humans impact the diversity and productivity of ecosystems.

SS.912.C.2.2 Evaluate the importance of political participation and civic participation.

-understand that characteristics of flora and fauna observed in the scrub habitat enable the organisms to survive in this ancient and inhospitable place and these specific adaptations have been inherited over many generations

SC.5.L.14.2 Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -- some with internal skeletons others with exoskeletons -- while some plants have stems for support.

SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

SC.6.L.15.1 Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.

SC.7.L.16.1 Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.

SC.7.L.15.2 Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.

SC.7.L.15.3 Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.

SC.912.L.15.7 Discuss distinguishing characteristics of vertebrate and representative invertebrate phyla, and chordate classes using typical examples.

SC.912.L.17.6 Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.

SC.912.L.17.7 Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.

-learn that organisms living in the xeric scrub have a variety of specific adaptations, both structural and behavioral, that allow them thrive in an area of extreme temperature and lack of water

SC.7.L.16.1 Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.

SC.912.L.15.13 Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.

-understand the effect the loss and change of the scrub has on the endemic and endangered species that thrive there

SC.5.L.15.1 Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.

SC.5.N.2.1 Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.

SC.7.N.2.1 Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.

SC.7.L.17.3 Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.

SC.912.L.17.8 Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.

SS.5.G.3.1 Describe the impact that past natural events have had on human and physical environments in the United States through 1850.

SS.6.G.3.2 Analyze the impact of human populations on the ancient world’s ecosystems.

-learn that Florida looked very different in the past and the processes that have shaped the state have produced the prime conditions for the fossilization process

SC.6.E.6.1 Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.

SC.6.E.6.2 Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.

SC.7.E.6.2 Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).

SC.7.L.15.1 Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.

SC.912.E.6.2 Connect surface features to surface processes that are responsible for their formation.

SC.912.E.6.4 Analyze how specific geologic processes and features are expressed in Florida and elsewhere.

SC.912.E.6.5 Describe the geologic development of the present day oceans and identify commonly found features.

-understand that the fossilization process involves a chemical change and replacement of minerals under pressure, producing fossils with different properties than the original bones

SC.912.L.15.1 Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.

SC.912.P.8.2 Differentiate between physical and chemical properties and physical and chemical changes of matter.