

# DINOSAUR INVASION!

Featuring Imagine Exhibitions'  
*Dinosaurs Around the World* Traveling Exhibit

## Field Trip Guide: Part B



SOUTH FLORIDA  
SCIENCE  
CENTER  
AND AQUARIUM

Fellow Educators,

Thank you for your interest in the South Florida Science Center and Aquarium (SFSCA). We look forward to meeting with you and your classes while you explore our exciting new exhibition, *Dinosaur Invasion!!*

This Field Trip Guide is designed to enhance your Science Center experience by helping you and your students prepare for your visit. This guide will answer questions such as: how long you can expect to spend at the science center and where you can eat your lunch. As you know, by preparing students in advance for their trip, they will better focus on the science content. Additionally, the exhibit creators, the Children's Museum of Indianapolis, has created pre- and post-visit activities perfect for use in the classroom to introduce the content of the exhibit, and then follow-up student field trips in hopes of enhancing retention. These activities are contained in the accompanying Dinosaur Invasion Education Guide. Have additional questions? Please call our Group Sales office at (561) 832-2026. It is our sincere hope that your experience embodies our mission to "Open Every Mind to Science." We'll see you at the Science Center!

Sincerely,

*The Education Team*

South Florida Science Center and Aquarium

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# Field Trip Planner

If you would like to schedule a trip to the South Florida Science Center and Aquarium, please call our Group Sales Office at 561-832-2026. Field trips may be scheduled at any time during the year. Also, when you call be sure to ask how you can order WT Cafe lunches for your group, including a sandwich, juice, and chips for only \$5.00! Call (561) 370-7741 for information on ordering lunch for your group.

## Pricing

*Pricing for groups scheduled in advance*

Boxed lunch from WT Cafe per student	.....\$5.00
Self-guided visit admission per student	.....\$7.00
Visit plus an additional demo/show program per student.....	\$10.00
Visit plus a laboratory program per student	.....\$12.00 - 15.00
Mini Golf on the Conservation Course add-on ticket	.....\$2.00

\*One chaperone is required per 10 students at \$7.00 per chaperone.

## Policies

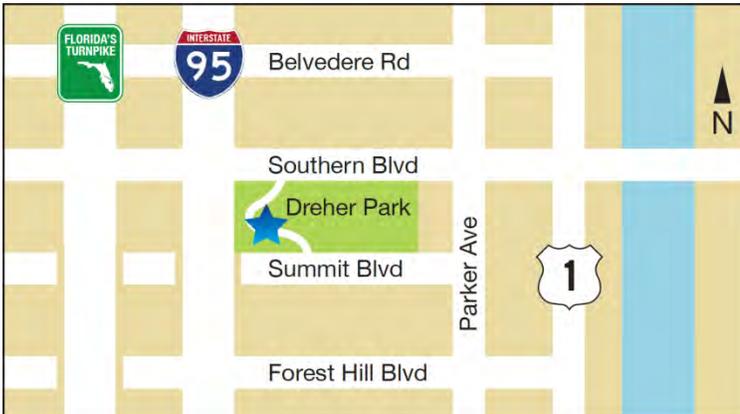
- Final payment must be made by the day of your scheduled visit.
- If final payment has not been received by the day of your visit, reservations are subject to cancellation. NO REFUNDS WILL BE GRANTED.
- On the day of your scheduled visit, check in your group at the Front Desk under your group/contact name. Additional tickets may be purchased at the group rate on the day of your scheduled visit, if space is available.
- Increase in headcount should be called in as soon as possible to ensure availability.
- Acceptable forms of payment are check, money order, or credit card (Visa and Master Card).
- Please make checks payable to the *South Florida Science Center and Aquarium* and mail to:  
*South Florida Science Center and Aquarium, Attention: Group Sales*  
 4801 Dreher Trail North  
 West Palm Beach, FL 33405
- Surcharges may apply for special event days and holidays.
- Science center memberships, coupons and other discounts are not applicable with school group rates.
- Teacher Members receive \$25.00 off first program booked

## Directions and Map

The South Florida Science Center is located at:

4801 Dreher Trail North,  
West Palm Beach, FL 33405.

Phone: (561) 832-1988



### From the Florida Turnpike:

Take the Southern Boulevard exit 97 east, and continue just past I-95. Make a right into Dreher Park. Follow Dreher Trail to the South Florida Science Center.

### From I-95, heading south:

Take exit 68, Southern Boulevard and head east. Immediately over the I-95 bridge, make a right into Dreher Park. Follow Dreher Trail to the South Florida Science Center.

### From I-95, heading north:

Take exit 68, Forest Hill Boulevard east to Parker Avenue. Turn left on Parker Avenue (north) to Summit Boulevard. Turn right on Summit (west). At the first light (Dreher Trail North), turn right and continue around to the South Florida Science Center.

## Science Center Manners

### **PLEASE REVIEW THESE GUIDELINES WITH YOUR STUDENTS BEFORE YOU ARRIVE AT THE SCIENCE CENTER.**

Please walk, do not run, while in the science center. This is for your safety, as well as the safety of others.

Please do not touch the glass on any exhibits, including the aquarium.

Please enjoy yourselves and the hands-on exhibits, but leave them the way you found them.

Please keep eating and drinking to the WT Cafe dining area (for WT Cafe customers only) and outdoors.

Please have students remain with their chaperone at all times.

Chaperones, please refrain from using your phones while supervising students at the Science Center

Violation of the rules could result in your group being asked to leave the Science Center.

No refunds will be given.

## Science Center Store Rules

Please do not allow more than 5 children per chaperone in the store at one time.

All sales are final, so please choose carefully.

## What to Do at the Science Center

### **Arrival**

Welcome! Once you arrive at the science center, have students either remain on the bus or line up on the patio space leading up to the front doors. Have your group leader check in at the front desk and get directions on where to go first. One of our SFSCA staff members will welcome and orient your group as a whole.

### **Programs**

Favorite programs such as planetarium shows, Nitromania, or Touch Tanks can be scheduled for a small fee to be added in with your field trip. Call (561) 832-2026 in advance to schedule.

### **Lunch**

Make lunch easy, fresh, and healthy for your students by ordering

WT Cafe boxed lunches in advance. This \$5 boxed lunch includes one sandwich, juice, and chips.

Call (561) 370-7741 to order your WT Cafe boxed lunches. You could also pack a lunch and store it on the bus until you are ready to eat. Picnic tables are available on the Science Trail or you can eat within Dreher Park, surrounding the Science Center.

## Exhibits

There are many exciting exhibits to explore at the SFSCA:

### *Aquariums of the Atlantic*

See marine life from around the world in over 10,000 gallons of salt and fresh water aquariums. A living coral reef, sharks, eels, the invasive lion fish and a "touch tank" create this wonderful undersea exhibit hall. Travel through Florida's diverse ecosystems of Everglades, Coral Reefs, Gulf Stream, and Open Ocean, home to the most beautiful native fish such as queen angels, lookdowns, moray eels, stingrays, seahorses and many more.

### *The Hidden World of the Everglades*

Experience the Florida Everglades ecosystem and listen to sounds of Florida's wildlife in their natural habitat in this interactive exhibit about America's only sub-tropical wilderness.

### *River of Grass*

Find out where our water comes from as you follow a drop of water from the Everglades to your faucet in this interactive display.

### *Florida Conservation Station*

This learning station brings to life the immense variety of life in Florida and the complex relationships among living things. Visitors become real world biologists at these learning stations that include hands-on experiments and research activities.

### *Frozen Shadows*

Lights, Action! 'Freeze' your shadow on the wall while you experience the effects of phosphorescence.

### *Marvin Dekelbom Planetarium*

Palm Beach County's only public planetarium features a full-dome, newly renovated digital projection system. Sit back and be transported through the Universe with daily star shows, interactive astronomy presentations and other immersive science adventures. It's only \$3.00 more per adult/child visitor to book as a group.

### *WS4FSM Ham Radio Center (days and hours of operation vary)*

Welcome to WS4FSM, the science center's exciting new Ham Radio Station, where you can broadcast to others in Argentina, Amsterdam, St. Kitts, or one of two million amateur radio operators around the world! The West Palm Beach Amateur Radio Club will assist visitors in writing their name in Morse code and in making contacts with other "hams" worldwide.

### *Discovery Center Powered by PNC Grow Up Great*

Children 6 years and younger can play and discover in their very own space! The Center's features include a giant 16 x 5-foot water table, a wall-sized Lite Brite play area, lounge area for parents, story time area with bookshelves, a dress-up area and more.

### *Nano Exhibit*

Nano is an interactive exhibition that engages family audiences in nanoscale science, engineering, and technology. Visitors will be able to build a giant model of a carbon nanotube, explore progressively smaller

magnetic materials, and explore the relative effects of static electricity and gravity using the Static vs. Gravity discs.

#### *Hands and Minds on Science*

Explore the basic principles of science with hands-on displays representing the states of matter, including solid, liquid, gas, and plasma displays. Continue through the gallery for more basic principles of electricity revealed through conversion machines and Jacob's Ladder.

#### *Out of This World*

Part of the Ambassadors of Space Exploration, the Science Center was honored by Apollo 14 Astronaut Dr. Edgar Mitchell with a long-term loan of an authentic Moon rock collected during the Fra Mauro expedition. This exhibit also features a Mars rock found in Nigeria in 1962, a 232 pound meteorite. Mitchell was the Lunar Module Pilot on NASA's 3<sup>rd</sup> Moon expedition where Mitchell became the 6<sup>th</sup> man to walk on the Moon. Authentic mission footage accompanies this rare display.

#### *Brainy Acts*

Exercise your mind with puzzling challenges for all ages!

#### *Conservation Golf Course*

Enjoy our brand-new 18-hole miniature golf course focused on Florida native plant and animal conservation and designed by Jim Fazio and Gary Nicklaus. Set within a giant butterfly garden and a series of babbling brooks, this educational mini golf experience is sure to be unlike any other. **Price is 2.00 per students for groups only.**

#### *Hurricane Simulator*

Have you ever experienced hurricane force winds? In our Discovery Hall, dial up the winds of a Category 1 Hurricane and see the 78 mph wind make your skin crawl! Visitors can also learn how to better protect their lives and property, and what to do once the storm has passed. The booth uses video, audio and high wind speed to make you feel like you are right in the storm!

#### *Science On A Sphere*

Science on a Sphere (SOS) is a room sized, global display system that uses computers and video projectors to display planetary data onto a six foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science on a Sphere as an educational tool to help illustrate Earth system science to people of all ages.

#### *Fisher Family Science Trail*

Enjoy the outdoors while continuing your science exploration! The upgraded, quarter-mile *Fisher Family Science Trail* connects 15 new exhibits including a Physics Forest, interactive splash pad, fossil dig pit, gem panning station, a dinosaur walk, picnic areas and much more.

# Next Generation Sunshine State Standards

## Kindergarten

**SC.K.L.14.3** – Observe plant and animals, describe how they are alike and how they are different in the way they look and in the things they do.

**SC.K.N.1.1** – Collaborate with a partner to collect information.

**SC.K.N.1.3** – Keep records as appropriate - - such as pictorial records - - of investigations conducted.

## 1<sup>st</sup> Grade

**SC.1.E.6.3** – Recognize that some things in the world around us happen fast and some happen slowly.

**SC.1.L.16.1** – Make observations that plants and animals closely resemble their parents, but variations exist among individuals within a population.

**SC.1.L.17.1** – Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.

**SC.1.N.1.1** – Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.

**SC.1.N.1.2** – Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.

**SC.1.N.1.3** – Keep records as appropriate – such as pictorial and written records – of investigations conducted.

**SC.1.N.1.4** – Ask “how do you know?” in appropriate situations.

## 2<sup>nd</sup> Grade

**SC.2.L.17.1** – Compare and contrast the basic needs that all living things, including humans, have for survival.

**SC.2.L.17.2** – Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.

**SC.2.N.1.1** – Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.

**SC.2.N.1.2** – Compare the observations made by different groups using the same tools.

**SC.2.N.1.3** – Ask “how do you know?” in appropriate situations and attempt reasonable answers when asked the same question by others.

## 3<sup>rd</sup> Grade

**SC.3.E.6.1** – Demonstrate that radiant energy from the Sun can heat objects and when the Sun is not present, heat may be lost.

**SC.3.L.17.2** – Recognize that plants use energy from the Sun, air, and water to make their own food.

**SC.3.N.1.1** – Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

#### 4<sup>th</sup> Grade

**SC.4.L.16.3** – Recognize that animal behaviors may be shaped by heredity and learning.

**SC.4.N.1.1** – Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

**SC.4.N.1.4** – Attempt reasonable answers to scientific questions and cite evidence in support.

**SC.4.N.1.6** – Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.

**SC.4.N.1.7** – Recognize and explain that scientists base their explanations on evidence.

**SC.4.N.2.1** – Explain that science focuses solely on the natural world.

#### 5<sup>th</sup> Grade

**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.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.5.N.1.6** – Recognize and explain the difference between personal opinion/interpretation and verified observation.

#### 6<sup>th</sup> Grade

**SC.6.N.3.1** – Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.

#### 7<sup>th</sup> Grade

**SC.7.E.6.4** – Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.

**SC.7.E.6.5** – Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, 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.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.7.L.16.2** – Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.

**SC.7.L.17.1** – Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.

**SC.7.N.1.5** – Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such biology, geology, and physics.

**SC.7.N.1.6** – Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.

**SC.7.N.1.7** – Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.

**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.

### 8<sup>th</sup> Grade

**SC.8.N.1.6** – Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.

### 9-12<sup>th</sup> Grade

**SC.912.E.6.3** – Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.

**SC.912.L.17.9** – Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.

**SC.912.N.3.1** – Explain that as scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.

**SC.912.N.3.2** – Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.

**SC.912.N.4.1** – Explain how scientific knowledge and reasoning provide an empirically based perspective to inform society's decision making.