

## **FAST FIELD TRIP OPTIONS, Thursday, October 21<sup>st</sup>, 2010**

Transportation for all field trips is “on your own,” however the conference committee will try and help field trip participants find rides if needed. All field trip times are start and end times AT THE FIELD TRIP LOCATION. Maps and approximate driving times will be provided.

### **Field Trip #1: GTM Research Reserve; Where the River Meets the Sea**

**Time:** 9:00am-12:00pm

**Cost:** FREE!

**Location:** GTM Research Reserve (Ponte Vedra Beach). This site is about a 30-minute drive from the conference location.

**Minimum # of participants:** 10 **Maximum:** 20 participants

This field trip will begin with an introductory talk about the National Estuarine Research Reserve System, a network of 27 protected areas charged with conducting research, stewardship, and education activities on and about estuaries ( <http://www.nerrs.noaa.gov/> ). Participants will then head out in the field to explore the estuary, one of the most productive ecosystems on earth. Exploration activities include pulling a seine net to examine aquatic organisms, taking a salinity measurement, and looking at salt marsh vegetation. Next participants will head to a pristine beach with 40 foot high sand dunes where participants can measure the beach profile and examine coquina sand. Participants will then head back to the Environmental Education Center for a tour of the exhibit hall and classrooms followed by time to visit the Nature Store and learn about K-12 program offerings.

**What to Bring:** Hat, sunglasses, rain coat (if rain predicted), water bottle, shoes that can get dirty, clothing suitable for the outdoor temperature

**Lunch:** On your own. If people bring a bag lunch, they can eat at outdoor picnic tables overlooking the salt marsh.

### **Field Trip # 2: St Augustine Alligator Farm and Zoological Park**

**Time:** 9:00 am-12:00 pm

**Cost:** \$11.50

**Minimum:** 15 **Maximum:** 35 participants

This field trip includes two programs and a tour of the park. In the first program, "Reptile Rally", teachers will define reptiles and subcategories using visual aids. Teachers will also learn about reptile groups and characteristics using hands on animal interactions and biofacts. In the second program, "Animal Classification", teachers will learn key characteristics that make animals similar to and different from each other. Students will examine several different classes of animals and learn what traits set them apart. Teachers will also be able to tour the park and watch an alligator feeding at noon.

**Field Trip # 3: Communicating Scientific Results Through Maritime Tradition**

**Time:** 9:30 – 12:15

**Cost:** \$15

**Location:** St Augustine Lighthouse and Museum. This site is about a 25-minute drive from the conference location.

**Minimum:** 12

**Maximum participants:** 25

**This program is geared towards:** 3<sup>rd</sup> Grade and up

Sailors and maritime scientists have always been keenly aware of the importance of knowing the water, the wind, the waves, and the weather – all part of the water cycle. Students are required to study the water cycle at various levels in school. This involves investigating, understanding, and articulating the relationship between evaporation, condensation, and precipitation through the scientific method. This workshop suggests experiments that teachers can do with their students to investigate various aspects of the water cycle and how the results of those experiments can be presented through the arts – specifically in poems or songs. These poems and songs can then become a novel and memorable way for them to present their findings to other class members as well as other audiences within the school or community. Events and information of all types have been documented in ballads throughout history and as part of the maritime tradition.

**Field Trip #4: Marine Biotechnology Lab for High School Teachers**

**Time:** 10 am – 4 pm

**Cost:** \$15 (includes lunch)

**Location:** Whitney Laboratory for Marine Biosciences, Town of Marineland. This site is about a 45-minute drive from the conference location.

**Maximum participants: 24**

Teachers will participate in a hands-on marine biotechnology program at the University of Florida's Whitney Lab for Marine Bioscience. Participants will perform experiments using DNA samples, PCR, and gel electrophoresis. They will isolate segments of DNA from unknown samples. By measuring the length of the DNA, and comparing it to the known lengths of two possible sources, participants will determine whether the mystery sample was taken from a fish or mollusk.

**Field Trip # 5: Marine critters: invertebrates to mammals.**

**Time:** 10 am – 4 pm

**Cost:** \$25 (includes lunch)

**Location:** Whitney Laboratory for Marine Biosciences and Dolphin Conservation Center, Town of Marineland. This site is about a 45-minute drive from the conference location.

**Maximum participants: 30**

This program is geared towards teachers of elementary-middle grades. In the morning, teachers will participate in hands-on experiments at the University of Florida's Whitney Lab for Marine Bioscience. Activities include learning about marine invertebrates at the touch tanks, observing and drawing plankton, and forming and testing hypotheses (conducting several experiments.) After lunch, teachers will walk across the street to Marineland's Dolphin Conservation Center, where they will participate in a classroom education program about marine mammals, followed by a touch-and-feed with one of Marineland's bottlenose dolphins.

Program location: Town of Marineland

**Field Trip # 6: Exploring the Estuary by Kayak**

**Time:** 1pm – 5 pm

**Cost:** \$25 (includes all kayaking equipment)

**Location:** Departing from Whitney Laboratory dock, Town of Marineland. This site is about a 45-minute drive from the conference location.

**Maximum participants: 30**

Come and learn field-based activities from St Johns County teachers who run an annual marine science summer camp program for rising 6<sup>th</sup>-9<sup>th</sup> grade students in the district. You will paddle from station to station in sit-on-top kayaks, and will learn about estuaries, salt marshes and life within these ecosystems. Come and see why the marine science summer camp is one of the most popular summer camps in the county!

**What to Bring:** Hat, sunglasses, rain gear (if rain predicted), water bottle, shoes that can get wet/dirty, clothing suitable for the outdoor temperature