



**AMES**

*Academy of Marine and Environmental Science*



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# Turtle Tracks

## *New Academy Gains Popularity at Beach*

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The new Academy of Marine and Environmental Science (AMES) was established as part of the Secondary School Reform movement that has been reorganizing high schools into smaller learning communities throughout Miami-Dade county. It is one of several new academies at Beach High and has rapidly gained popularity among students and community organizations. New students entering the academy will have the ability to complete an array of classes including Marine Science 1 and 2, Environmental Science (or AP Environmental Science), and participate in research and data collection activities related to

the Miami Beach community environment. The academy program will also offer internships and vocational opportunities that can lead to a variety of related careers or continuing study at the university level. The academy has already partnered with several prestigious organizations which will provide support, field trips, and other exciting opportunities.

Mr. David Guthrie, Science Chair at Beach, has been very busy laying the groundwork for establishing the new program and will serve as lead teacher for the academy. Last school year, several Beach High students were involved in some of the preliminary activities that



*Beach students collecting data for Clean Beaches Campaign*

will support the academy projects. Many of these are highlighted in this first edition of *Turtle Tracks*, which will be the official newsletter of the academy. There are currently over 150 students registered in environmental and marine classes.

### NEW SCIENCE RESEARCH CLASS:

- Space available for several students
- Allows time for individual research, science projects, competitions, and fairs
- Has a fun unit building and competing with robotic cars
- Lab student aides also needed
- See Mr. Guthrie ASAP

## *Partners Support Academy and SCUBA Club*

Several organizations and businesses have already partnered with AMES to provide support and exciting research and field trip opportunities. They include the Shepard Broad Foundation, WOW (World Ocean Watch), Forest Watch, ECOMB (Environmental Co-

alition of Miami Beach), Miami Dade County Parks and Recreation Department, and Divers Direct. These partners have already been active in organizing a variety of new projects and research opportunities for students. One major development has been the es-

tablishment of a Beach High SCUBA club that will not only provide swimming and diving certification, but allow academy students to participate in underwater data collection, photography, and reef restoration. These will truly be exciting opportunities for students.

## Shepard Broad Foundation Funds AMES

Morris Broad, Beach High graduate and local philanthropist, recently met with Principal Rosann Sidener and AMES lead teacher David Guthrie with a desire to provide real support for a program at his Alma Mater. After hearing about the Academy of Marine and Environmental Science and its many needs, Mr. Broad felt that this new program could truly benefit from his family foundation. Initial funds provided by the Broad

Foundation will be used to erect a greenhouse and build a research plot of Florida Pine and other native species somewhere on the new Beach High Campus. This area will be used by AMES students for data collection and other lab studies. Funds will also provide students with fieldtrip opportunities to Biscayne Nature Center, Florida Everglades, and other sites for data collection to support both the Forest Watch and World

Ocean Watch activities. Additional funds can be used for classroom materials and supplies as part of the academy activities and trips. The funding will also provide a scholarship for a graduating senior of the academy. The academy is very grateful to Morris Broad and the Shepard Broad Foundation for their support of AMES and we look forward to continuing our partnership with the Broad family for many years to come.



Beach students collecting data of surface trash

**“Have you seen any students wearing T-shirts saying ‘Beach Protector’ or banner planes on South Beach with catchy slogans encouraging cleaner beaches?”**

Several Beach students have been collecting data as part of ECOMB’s Clean Beaches Campaign. ECOMB (The Environmental Coalition of Miami Beach) obtained a grant from the City of Miami Beach to study and provide data for promoting cleaner beaches. Luiz Rodrigues, executive director, asked Beach to be a

partner in this effort. In this ongoing project, students first collected data on the amount of surface trash existing in various gridded locations on South Beach. They actually counted every piece of litter in these randomly selected areas and added this data to other collection groups. In the current second phase, students

interview beach-goers on their awareness and habits about trash on the beach. Each respondent is given a biodegradable beach clean-up bag. The students will continue in this project through the end of the study, which will compare the amount of surface litter to the baseline data. For more info on ECOMB see [ecomb.org](http://ecomb.org).

## Beach Students Join “The Big Sweep”



Beach High team at “The Big Sweep”

On Saturday, June 14th, Beach students, along with Mr. Guthrie and Mr. Rehage, joined hundreds of local business teams in “The Big Sweep”, a one-day mass clean-up competition of South Beach. Teams started at 14th Street and Government Cut, and met in the middle with all of their trash.

Awards were given for most trash collected and most cigarette butts collected. Several large teams representing hotels and other beach businesses had a clear advantage, but most agreed that it was the beach itself that won. Ms. Cunningham also provided a film crew to document the event, and the

episode will air in the future on the new AMES TV show. Students received praise from ECOMB director Luiz Rodrigues and Miami Beach Mayor Mattie Bower. ECOMB plans to run this event every year, so let’s bring the trophy to Beach High next year. For upcoming events see [ecomb.org](http://ecomb.org).

## Forest Watch Program

Starting this year, AMES students will participate in collecting data as part of the Forest Watch Program sponsored by Dr. Barry Rock at the University of New Hampshire. Last April, Beach teachers Luisa Dias, Carlos Rodrigues, Paul Rehage, and David Guthrie, along with several feeder pattern science teachers were trained in the Forest Watch program. Two main components of the project include the sampling of local pine tree

species for atmospheric ozone damage and comparing this data with images from NASA satellites. Samples are also sent for spectral analysis at the UNH labs. Student data is published by the university. Also at the workshop were Phil Browne of Concord High School, cofounder of Forest Watch, and Mike Gagnon, program coordinator. The group was also welcomed by Miami Beach Commissioner Jerry Libbin, school board

member Martin Karp, and Region 2 representatives. Students will attend field trips to monitor various locations of Florida Pine, and eventually will plant a pine stand on campus for study. Patxi Pastor of WOW, and longtime collaborator with Rock and Brown, will work with the group to develop similar programs for students to monitor sea turtle nest sites and other ocean data. The Forest Watch website is at [www.forestwatch.sr.unh.edu](http://www.forestwatch.sr.unh.edu).



*Beach teachers learn the Forest Watch program*

## WOW Promotes Experiential Learning

Patxi Pastor, founder of World Ocean Watch, has become a major supporter of the new academy. His goal is to provide students meaningful learning experiences that can't take place in a typical classroom setting. He often relates his own experience as a reluctant student. It wasn't until his love of the environment and pho-

tography took him out of the classroom that he found his passion. Experienced in production and bringing people together, Patxi is working with Rock, Browne, and Beach High to acquire grants and other funding to bring his Ocean Watch program to fruition at our school. WOW programs will provide exciting and

meaningful learning for our students. Past WOW programs have sponsored student ocean voyages and television documentaries. WOW will develop the model for a turtle database project for students at Beach, as well as sponsor a weekly TV Show for student activities in the academy. The WOW site is [www.celebrationofthesea.org](http://www.celebrationofthesea.org).

**"AMES students will be involved in WOW projects like monitoring sea turtle sites, underwater photography and reef restoration."**

## AMES Students will Monitor Sea Turtles

AMES students will participate in a project being developed by WOW to monitor endangered sea turtle nesting sites on Miami Beach. Bill Ahern, turtle specialist with Miami-Dade Parks and Recreation recently met with David Guthrie, academy lead teacher, and Patxi Pastor of WOW to plan the

program. Ahern will provide students the opportunity to locate and record data at next seasons nesting sites, as well as include students in other aspects of the county's turtle program. A goal of WOW is to receive a grant to fund the use of NASA satellite imagery to maintain a yearly data base on

the sites. Students will organize the database and include information going back several years using existing site information. No such database currently exists that would show the changes in sites over time. AMES looks forward to participating in this exciting and meaningful work.



*Database will monitor sea turtle nesting sites*

## Miami Beach Senior High School

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David Guthrie, Lead Teacher

*AMES Mission: The Academy of Marine and Environmental Science seeks to enrich our students with scientific knowledge for the ever-changing world; to promote environmental literacy and activism in order to become productive citizens of the South Florida community and the world beyond.*

*AMES vision: To accomplish our mission in cooperation with our local and national partners by establishing small learning communities dedicated to promoting interest and careers in Marine and Environmental Science*

# Website soon!

Environmental wisdom for tomorrow's world....today!



# AMES

*Academy of Marine and Environmental Science*

## *SCUBA Club Excites Students and Staff*



**DIVERS DIRECT**

Beach High recently partnered with Divers Direct to provide support and instruction for swimming and diving certification for our students. This program will give students the ability to participate in AMES sponsored projects and trips for underwater photography, data collection, and reef restoration. Dr. Becky Salichova will sponsor the club. Upon hearing of this new opportunity, several dive-certified Beach teachers and staff members have agreed to help. Bill Crumbaugh of Divers Direct will help coordinate the program. Divers Direct will donate

equipment to the academy for use in the certification process, as well as provide curriculum and instructional support. While still in the organizational and approval stages, the SCUBA Club will begin operation this school year. Initially, students will be required to achieve a safe swim status using current programs in place by the district at Scott Rakow and Flamingo pools. As the program expands, Divers Direct will provide packages for SCUBA certification of club members in support of the academy at reduced rates. The academy is currently working

on ways of providing funding through grants and business sponsorships for students and dive trips. It is the goal of the academy to include multi-disciplinary instruction with certification as part of an academy class that will also lead to vocational opportunities for students. Initially, instruction in support of the new program will occur in the Marine Science classes. For further information, see Dr. Salichova or Mr. Guthrie.