



**AMES**

*Academy of Marine and Environmental Science*



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# Turtle Tracks

## *AMES Flourishes, Elects Officers, Organizes Board*

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The new Academy of Marine and Environmental Science (AMES) has rapidly become one of the most popular programs at Beach High. Although this year's 10th grade students will become the first group to complete the entire program, dozens of other students have been involved in the academy through their science classes. There are currently over 100 students enrolled in Marine Science 1 or 2, nearly 50 in Environmental Science, and over 60 in AP Environmental Science. The SCUBA Club has been an instant success, with its first set of students beginning their training. One group of Biology students has been to the Ever-

glades, and other groups of students will participate in Forest Watch and WOW activities on upcoming field trips. Several community organizations and businesses have expressed interest and offered support. "So many past students have told me that they wished we had this program when they started high school," reports Mr. Guthrie, lead teacher. "I am really happy about the impact the program has had on the school and the positive response we have received from the community." The academy recently elected its first set of officers. Senior Miriam Kolker will serve as this year's president. Miriam has been very active in AMES



*AMES students promote clean beaches*

activities since its inception, and plans to pursue a biological degree in college. AMES also has established its Advisory Board which will meet in January. Officers and board members are listed on the academy webpage at the school's website.

### AMES Partners

- Shepard Broad Foundation
- World Ocean Watch (WOW)
- ECOMB
- Divers Direct
- Tarpoon Lagoon
- UNH Forest Watch
- Miami-Dade Parks and Recreation
- Coast Guard Auxiliary

## *AMES Students to Visit Everglades*

AMES students will be visiting the Florida Everglades every year while in the academy. Mr. Paul Rehage, Marine Science teacher, will accompany the students and organize several student activities. AMES students will collect samples from Florida pine species that will be

studied as part of the Forest Watch Program, sponsored by the University of New Hampshire. Needles can be used as indicators of ozone damage. This annual trip for new students in the academy will introduce multiple marine and environmental concepts that will

focus their studies and provide an introduction to understanding the ecosystems that make up their South Florida home. It is a goal of the academy to promote awareness of local issues and activism among our students. Several trips are being organized.

## World's Largest Coastal Clean-Up Day



Several Beach students, along with Mr. Rehage, attended the world's largest coastal clean-up event this past September 20th. The annual event, sponsored by the Ocean Conservancy began in 1986, and has grown to include over 6 million volunteers in 127 countries. Always held on the third Saturday in September, volunteers collect data on amounts and types of trash as they collect it for disposal. Dozens of local organizations participate in the

event with help from environmental agencies and coast guard auxiliaries. Volunteers record each piece of trash collected. Local and regional coordinators then tabulate the raw data to include total poundage and number of volunteers in each area of collection. Data is then forwarded to the Ocean Conservancy to produce a global snapshot of the current status of our world's oceans. The annual clean-up day serves to raise awareness of the

monumental problems of environmental degradation and hazards to marine animals due to pollution. The event demonstrates how single, caring individuals can unite in one massive effort to truly impact global problems. Further information and results can be found at the Conservancy website. Thanks go to our Beach High volunteers.

[www.oceanconservancy.org](http://www.oceanconservancy.org)



*Beach students at coastal clean-up day*

## ECOMB Offers Events for Students and Adults

Several Beach students have been participating in events sponsored by ECOMB (The Environmental Coalition of Miami Beach). As part of the "Clean Beaches Campaign", students have collected data on the amount of surface trash and conducted surveys of beach-goers on their littering habits. ECOMB sponsors

weekly clean-up events of area beaches, canals, and intra-coastal islands. Student volunteers receive community service. ECOMB also sponsors many social events and parties at beach hotels and other venues that feature local dignitaries and celebrities for fund-raising efforts. These events are generally open to the public and are

advertised on the ECOMB website. ECOMB provides a variety of dates and times for students and adults to participate in eco-friendly activities. See Mr. Guthrie or Mr. Rehage for information on events that our school plans to attend as a group.

Visit ECOMB's website for a monthly list of community and beach clean-up events and sponsored activities.

[www.ecomb.org](http://www.ecomb.org)



*AMES students view turtle hatchlings*

## Sea Turtles Visit AMES Classes

AMES students received a presentation this past September on Miami-Dade's sea turtle program from director Bill Ahern from the Department of Parks and Recreation. Mr. Ahern holds the county permit for monitoring and rescuing the turtles, if needed. Students from Mr. Rehage's Marine

Science, Mr. Guthrie's AP Environmental Science, and Ms. Diaz's Biology classes had the opportunity to observe new hatchlings before their release into the ocean. Students received information on the many problems the turtles face due to development on the beaches. The academy plans to

develop projects to assist the county in its turtle program, including the development of a data base of turtle nesting sites from year to year. Students also have the opportunity to accompany park employees on their early morning walks to identify any new nest locations during egg laying season.



*Hatchlings ready for release*

## SCUBA Club Receives Equipment/Training

The new SCUBA Club at Beach High is underway with great success. With the help of Patxi Pastor of World Ocean Watch, several local organizations have joined AMES to provide our students with the ability to become certified divers. After completing the process, student and teacher divers will participate in underwater reef restoration, photography, and other diving activities. Bill Crumbaugh of Divers Direct, agreed to provide our

school with loaner equipment for the training. Jake Shekels of Tarpoon Lagoon, agreed to provide classroom and water instruction at reduced rates for the academy. Both companies have offered discounted packages to our students for the purchase of personal gear and equipment. Joining the academy as members of the Advisory Board, these organizations will provide a significant opportunity for our students. Academy leaders are diligently

working to provide funding for support of this program, including scholarships for student certification and travel expenses for dive trips. The SCUBA club is under the direction of Dr. Salichova and meets regularly on Fridays during lunch. The club has recently been raising funds by parking cars at the auto show. We thank Divers Direct and Tarpoon Lagoon and encourage our Beach High family to support these sponsors.



SCUBA club members prepare for swim test



"I can do it!"



[www.tarpoondiveshop.com](http://www.tarpoondiveshop.com)



[www.diversdirect.com](http://www.diversdirect.com)

## Students Pass First Step Toward Certification

On November 5th, 35 Beach High SCUBA Club students passed their initial swim test to begin their certification process. Students had to tread water for ten minutes in the same spot, keeping their head above water. They also had to swim non-stop for 200 yards with any style swim stroke. Several Beach teachers have also been

participating and helping with the certification process including Bob Ellis, Andy Weiss, Gina Cunningham, Sara Staiger, and Becky Salichova. Ron Hunter and Paul Rehage recently became NAUI certified through the academy program. Students must now write an essay and participate in an interview process to fill the 16-

24 positions available in this years training program. As the SCUBA Club continues to grow, AMES hopes to provide additional funds for certification scholarships for members of the academy. AMES will incorporate safe boating and diving instruction as part of our classroom instruction and internship opportunities.

Look for the "Jolly Roger" around the school. It seems to be popping up in SCUBA friendly rooms everywhere!



## WOW Presentation at Club Meeting

Patxi Pastor of World Ocean Watch (WOW), along with Dive Master Jake of Tarpoon Lagoon, met with the Beach High SCUBA Club during a recent meeting. Patxi presented a video of some beautiful dive trips, giving students a taste of what a dive experience is like. He introduced Jake, who will

be training our students for their SCUBA certification. They discussed with club members the seriousness of diving and the expectations that we have for students participating in the program. Miriam Kolker, President of the SCUBA Club, discussed upcoming events for the club

and introduced the new SCUBA Club logo. Students will be selected for training after completing their initial swim test and other selection criteria. AMES plans to involve students who become certified in reef restoration projects, underwater photography, and monitoring of local species.



Patxi Pastor (WOW), Dr. Salichova, Divemaster Jake, Mr. Guthrie

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[miamibeachhigh.schoolwires.com](http://miamibeachhigh.schoolwires.com)

You will find us in the Academics Section

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



*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*

## *Science Classes Support AMES Programs*



Students from many Beach High science classes are participating in activities that support AMES programs. Students from Ms. Diaz's Biology classes recently visited the Everglades and collected needles as part of the Forest Watch Program. Additional trips to the Glades and Biscayne Nature Center are planned for students of Ms. Russell and Ms. Staiger. Students from Mr. Guthrie's research class have been trained to use NASA LandSat images to analyze spectral signatures of forested areas. These students will participate with AP Environ-

mental Science classes to analyze data they collect on their trips. Student data will appear in publications of the Forest Watch Program by the University of New Hampshire in support of national pollution monitoring. Mr. Guthrie's AP classes also completed a study of plankton diversity in local freshwater systems, showing the effect of human impact and pollution in the Dade Boulevard Canal. Mr. Rehage's Marine Science classes provide a foundation for AMES instruction. Students will be participating in this year's National Ocean Sciences Bowl Compe-

tion in February, as well as our local district Science Fair. Several of Mr. Guthrie's students are also testing the use of organic methods to maintain a 4 X 8 foot garden plot donated by a local beach civilian group. Plans are also underway to construct a greenhouse and native species restoration area with the help of students, volunteers, and the city of Miami Beach. The Shepard Broad Foundation has provided funds for the greenhouse. The native plant area will be maintained and monitored by AMES students. Data will also be used in support of Forest Watch.