

Marine Science Research Methods at Coconut Island
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On October 23, 2008 the marine biology class at Waialua High and Intermediate School (WHIS) headed out to the Hawaii Institute of Marine Biology (HIMB) research station on Coconut Island. This was an exciting trip for these particular students since they are the first marine biology class at WHIS in over a decade. My main goal for this class was to provide the students with as much experience and practice in marine science research outside of the classroom so that they could determine if marine research was something they might consider as an option for a future career.

On our way to Coconut Island, the students helped researchers collect samples using a piece of equipment called a CTD, which measures the depth, salinity, temperature and fluorescence of the water in real-time. This was a fantastic way for my students to get hands-on experience in collecting raw data. In addition to collecting samples using the CTD, students took turns checking the clarity of the water using a secchi disk, and conducting a plankton tow which resulted in a rich sample that the students took back to the laboratory classroom on the island. Once back in the lab, students were split into groups. The groups rotated to different stations that included a) having students use the computer to help analyze the data that was measured with the CTD; b) identify the plankton from the net tow under the dissecting scopes, and; c) using reference material to learn more about different types of plankton.



Figure 1: Preparing for a CTD cast!

After we left the classroom, we were taken on an extensive tour of the research facilities and learned about some of the research being conducted on the island as well as about the history of how Coconut Island became a research institute. The students were impressed by the amount of work being done and enjoyed peeking in rooms and tanks to see what was happening.

The following month, the students and I were aboard another ship and the captain allowed the students to use what they had learned on our trip to conduct a plankton tow, use the secchi disk, and collect water samples so that the students could test certain factors using a LaMotte water monitoring kit. Students returned to the classroom, and researched the plankton they collected using “Phytopia”, an educational CD-ROM, that was also purchased using the GEMS grant, which has a large searchable database of plankton for the students use.

My eight marine biology students have shared their exciting experience at Coconut Island with their friends and peers, which has helped to increase next school year’s marine biology enrollment to 23 students. I am already looking forward to next year, and will be more prepared to assist and guide my students in handling equipment and practicing proper procedures in conducting marine science research.