



Traci Downs (left) and Erin Nishimura of Honolulu high-tech firm Archinoetics LLC prepare to launch one of the Project Niu sensors.

JOSIAH SEWELL

“Project Niu gives students the opportunity to integrate science concepts with other disciplines [such as] math and technology,” says Mary Costello, high school marine science teacher at the Academy of the Pacific in Honolulu. “The lesson plans made it easy for me to integrate content topics. I

Ocean from Waimea Bay on May 8, 2008. Students lovingly decorated it with colorful stickers and wrote messages on it about recycling. One sticker contained contact information so the Niu could be returned if it ran aground.

The Niu follows a path similar to floating marine debris, showing students how trash can reach distant islands. Teachers tell students about the “Great Pacific Garbage Patch,” a huge gyre in the northern Pacific Ocean littered with tons of plastic debris. This helps students realize the negative effects litter and pollution have on a marine ecosystem. To reinforce this knowledge, students participate in cleanups at beach parks and key watershed sites.

The first Niu traveled 1,471 miles by September 7, 2008, when its battery expired. On January 30, 2009, three more were launched from the east side of Oahu: Niu Melemele, Niu Poni, and Niu `Alani. This time, more

than 150 students from seven classes at three schools (Kawananakoa Middle School; Kaneohe Elementary School in Kaneohe, Hawaii; and Academy of the Pacific) attended the launch. The three are expected to travel for a year, according to Nishimura.

“We’ve all really enjoyed working with the kids,” she observes. The project has moved some students to consider careers in engineering and science.

Archinoetics is exploring ways to “make the project more sustainable,” she notes. Besides seeking additional funding from NOAA, the company has begun a campaign to raise funds to build and launch five Niu for schools nationwide during the next school year. The additional funds would also support the creation of a virtual Niu software application so that even landlocked schools could launch and study their own “coconuts.” ●

and hypothesize about where the Niu will travel based on ocean currents, weather patterns, tides, and other factors. They learn how to interpret the data. They also study marine animals in their natural habitat.

found it very easy to adapt the lessons to a high school audience.”

The project began with one sixth-grade science class at Kawananakoa Middle School in Honolulu. The first Niu was deployed into the Pacific

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