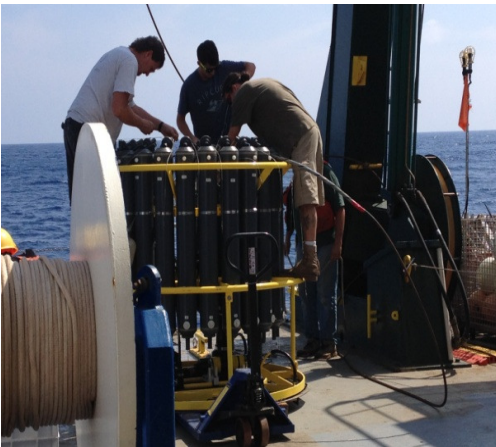


Science Teachers Aboard Research Ships (STARS); A Hawaii Ocean Times Series

By Kimberlee Stuart, Kapa'a High School Science

In February 2014 I embarked on a learning journey with two other teachers, a crew of research scientists, graduate students and others, in the educational opportunity of a lifetime. Our mission was to use science to garner more knowledge about the ocean aboard a remarkable vessel named Kilo Moana. Our destination was 100km North of Oahu at location dubbed 'Station Aloha', and our trip was the 260th of the monthly Hawaii Ocean Times Series cruises (HOT 260) <http://hahana.soest.hawaii.edu/hot/>. Through a Grant for Education in Microbial Science (GEMS) offered by The Center for Microbial Oceanography (C.MORE), the three of us were afforded the opportunity to learn with, and work alongside scientists in the North Pacific.



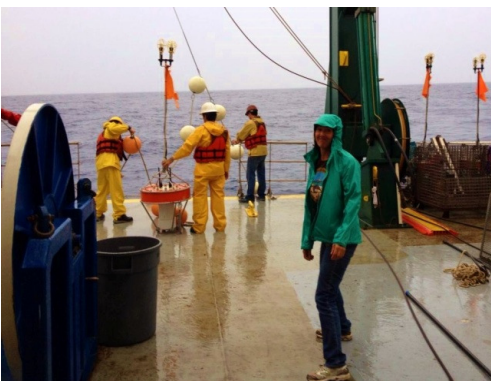
Scientists ready our Niskin bottles for deployment

One of the primary activities on our voyage was collecting and analyzing data; from right at the ocean's surface to as deep as 3 kilometers. At Station Aloha, nearly anything you can imagine is investigated about the ocean; from chemistry of the ocean to plankton, and from viruses and meteorological data to the growing problem of our plastic debris. Beneath the sea at Aloha Station microphones are mounted so that those interested can even listen to whale songs! <http://acosds.soest.hawaii.edu/ALOHA/index.html>. In the Kilo Moana Lab we examined samples collected from our Niskin bottles through chemistry techniques such as titration, and viewed wiggling plankton gathered from our plankton nets under the microscope. Learning didn't end in the lab, nor did it end in the day. One blustery evening we watched scientists snag an observation buoy from a raucous ocean. We also attended meetings, presentations and even a tour showing us the workings of this vessel from stem to stern.



Myself and two colleagues aboard the Kilo Moana

My experiences aboard the Kilo Moana have inspired and reinvigorated my teaching; the ultimate effect has been much the same as that of a round-the-world sabbatical I had taken years ago. Upon return to my classroom students were immediately engaged and full of questions as I excitedly showed them photos and told them stories of my adventure. This enthusiasm continues as we replicate lab experiences, and investigate the



Rain at Station Aloha in the North Pacific during equipment recovery

data gathered by others in the Hawaii Ocean Times Series. Maritime careers are now a big topic of discussion with my students, as are the amazing technologies and the engineering of the Kilo Moana. Perhaps the most important outcome of my experience on the STARS cruise was a rekindled passion, interest, and curiosity in oceanography that has obviously been contagious in my classroom. I certainly plan to continue to both share and learn more about our oceans with my students and community, and I am confident that as our collective knowledge about the ocean grows, so can our optimism about the future of our oceans and our planet.



What happens to a student's colored Styrofoam cup at a depth of 3 km?