

## STARS Cruise By Patti Stover

As I was browsing through my email, a certain memo caught my attention. It was an invitation for Science teachers to apply to participate in an Oceanographic cruise. It sounded like it would be a lot of fun, so I applied to the program. As a Marine Science teacher, I was looking for resources that I could use in my class, so I thought it would be a wonderful opportunity.

Then I got the response that it would be a study on Microbial Oceanography. That sounded a bit intimidating. I thought it would deal with phytoplankton, but beyond that, I was not sure what to expect.

I had envisioned science teacher's retreat of sorts, where 20 or so teachers would learn about the ocean environment. But much to my surprise, I discovered that only 3 teachers were invited on a space available basis. All of the others on board were oceanographers completing longitudinal data studies on properties of the Pacific Ocean.



We were 60 miles away from civilization on our little island, *Kilo Moana*, swaying to the rhythm of the Pacific Ocean. We did the same research projects, but on a smaller scale, as the other scientists. We examined microorganisms captured in the plankton tow. We analyzed water samples for fluorescence, which helped us understand the relationship between ocean depth and chlorophyll abundance; we also wanted to compare the amount of chlorophyll in different sizes of phytoplankton. We measured temperature and

conductivity at various depths, and analyzed the dissolved oxygen concentration at each depth. We interviewed various researchers to find out what their role was in this study, which has been going on for over 20 years.



As special guests, we also had the opportunity to tour the entire ship, from the bridge where the captain and mates monitor critical navigation, to the bowels of the ship, the engine room and motors. We met engineers along the way who explained their responsibilities on the cruise.

This was one of the most productive professional development opportunities I have ever taken part in. Not only did we learn what real scientists do in the field, we also learned how to take this experience back into the classroom. CMORE has created an oceanography curriculum that is thorough in all aspects. On our cruise, we sampled some of these activities, and I was excited to try one of the kits when I returned to Konawaena High School.

The kit I borrowed, *The Ocean Conveyor Belt*, exceeded all my expectations. It was complete, well-organized, easy to follow and student-friendly. I plan to include other kits in my class in the future. I would highly recommend this cruise and the kits to all science teachers.