

Teacher at Sea (TAS) Program

Dena Deck, Foster Elementary School

Overview of Program: The National Oceanic and Atmospheric Administration (NOAA) looks for teachers who are motivated to do scientific research at sea aboard an ocean-going vessel. You become a research member of the crew/team under the direction of the Chief Scientist. As a teacher at sea, you are expected to submit a report to NOAA detailing cruise events; implement classroom units/lessons based on the experience; and conduct presentations to educators/or article for publication.

Cruise: I was assigned to the R/V Wecoma for a two-week research cruise departing Seattle, WA and returning to Newport, OR. My research investigation was of the hydrothermal activity at Axial Volcano on the Juan de Fuca Ridge.

Chief Scientist: Dr. E. T. Baker NOAA/PMEL

Our purpose was to collect physical and chemical oceanographic information that would support a variety of investigations utilizing towed and vertical DTP/rosette ASTS, mooring deployments and recoveries and chemical sampling. Our cruise is a continuation of the NOAA/VENTS New Millennium Project (NEMO) to establish a sea floor observatory at the summit of Axial Volcano. Location is approximately 100 miles off Cannon Beach, OR (Latitude: 45.55N – Longitude: 129.59.184W). We worked 24 hours a day, little sleep. I was given 2 shifts each day to support cast and tows. Learned to stock and restock Niskin bottles (19-liter) for Rosette samples – CTD systems. Manned the wench for cast and retrievals. Placed current meters and MTRs (Miniature Temperature Recorders) on mooring lines with the aid of other scientific personnel. Recorded sighting of marine mammals. Major duty to write teacher log for NOAA web page, took 300 disc-photographs/videotapes – 1-hr – to be used for educational activities and/or NOAA site. I slept about 6 hour a day, but enjoyed every minute... hard work with no land in sight for two weeks.

Vessel: WECOMA: Oregon State University research vessel

Study: Axial Volcano, Juan de Fuca Ridge

VENTS program

Instruments deployed across the rift zone

NEMO site includes entire summit caldera of Axial Volcano

Sample of bacteria (Univ of Hawaii)

Plume study from Hydrothermal Vent most important to my group

(Relationships between geology, hydrothermal venting, and biology at eruption site)

I have presented material for NOAA Teacher at Sea Program along with Sea Education material from Woods Hole at California Science Teacher Association in Long Beach for their October convention and Cabrillo Marine Aquarium workshop for educators.

Check out the NOAA teachers log:

<http://newport.mel.noaa.gov/nemo/teacher.log.html#WECOMA>