

*Becoming
Environmentally
Eloquent:*

Enviro thon 2010



imagine

by Peter Satterthwaite



It was the opening ceremony of the 2010 Canon Envirothon. As a member of the Rhode Island team, I was supposed to blow a vuvuzela when our team captain appeared carrying the state flag. I was so excited to be at the Envirothon, though, that I almost blew the vuvuzela too early—five times.

Teams of high school students from 45 states and 9 Canadian provinces had gathered for five days at California State University in Fresno to demonstrate their knowledge of environmental issues. My team had entered our state competition as part of our 9th grade AP Environmental Science course—and won. As the only all-freshman team of the 266 teams competing in North America's largest environmental science competition, we felt especially lucky to have made it this far.

Environmental Awareness

The national format would be the same as our state format had been. Moving through five stations, we would be tested extensively on our knowledge of soils and land use, forestry, wildlife, aquatic ecology, and this year's current environmental issue, groundwater. Because the ability to speak about natural resources is important in addressing environmental issues, we would also prepare and give an oral presentation to a panel of judges.

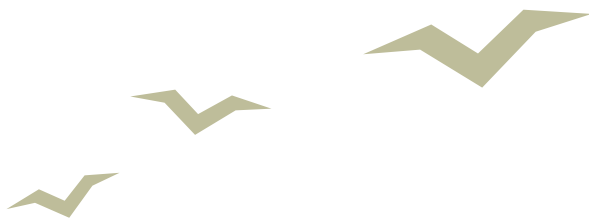
The competition is hosted in a different locale each year in order to expose students to diverse environmental issues, ecosystems, and topography. Although we had studied the competition subjects

in class, a portion of each of the tests at the nationals would be related to the site of the competition—this year, the San Joaquin Valley. Following the opening ceremony, we would attend workshops to learn how the environmental topics we'd already studied related to the area.

Five 45-minute workshops were offered, one for each subject. In the interest of time, we decided that each of our five team members would attend three different workshops so that at least two of us would become experts on a given topic. It was decided that I would attend workshops on forestry, wildlife, and soil.

In the workshops, I learned that since we were technically in a desert that receives less than 10 inches of rain per year, there's little moisture holding the topsoil down. (That explained the dusty air I'd noticed upon arriving in Fresno.) Still, the valley's soil is very fertile and is important in the production of grapes, almonds, and pistachios—all of which had been included in our welcome package. Unfortunately, growing these crops in the desert requires intensive irrigation, which is depleting the groundwater aquifer under the valley.

I also learned the difference between



the cones of a ponderosa and Jeffrey pine, how to read forestry maps, what happened to Lake Tulare (a lake in southern California that disappeared after its source rivers were overdrawn for irrigation and municipal use), and the significance of duripan (a hard layer of soil under the ground surface that limits the depths to which plant roots can grow).

Station to Station

The next morning, I was relieved to see that our first test would be on forestry, one of my specialties. Like the workshops, the stations would each run 45 minutes in length. We got to work, dividing the pages of the test among team members, occasionally getting into disputes over difficult questions. I identified tree samples and answered questions about forestry that a local forester had prepared for us, such as “What three parts of woody plants do the growing?” and “How do wildfires aid in forest growth?” The most challenging part for us was using a clinometer, a tool for measuring slope, elevation change, and tree heights.

Next up was wildlife. Since another teammate and I knew the most about the subject, we worked on the test with occasional help from our teammates. We moved through the soils station, where we were required to work in a soil pit, an excavation for assessing soil properties. Then came aquatics, where we tested water samples and completed a written test. It went well until the last three minutes when we discovered that I had been sitting on a page of the test and had to rush to get an answer on the page. That left the groundwater station, which we completed, happily, without any problems. Afterward, we breathed a sigh of relief. The station testing was done.

We were tired, but we were excited, too, because Envirothon officials had planned a fun evening for us at a local water park. We made friends with the Vermont team and had an awesome time, from accelerating down the adrenaline-pumping “toilet bowl” water slide to relaxing in the wave pool. Back at our dorms, we fell asleep quickly. We had to rest up, because the next day was going to be impossible.



Top: Peter (front row, right) and team members inside a giant Sequoia. **Bottom:** Peter (right) and teammate Eric Esposito work to identify pine needles at the forestry testing station.

Doing the Impossible

In the morning, in preparation for the following day’s oral presentation, we attended lectures on groundwater issues in the San Joaquin Valley. We then began preparing our oral presentation. In our assigned classroom, we had eight hours to prepare an oral presentation that addressed the problems of pollution and over-drafting (when more groundwater is removed from the ground than nature can replace) of California’s groundwater.

We spent the first hour and a half brainstorming and assigning roles. Two team members worked on posters, a required component of the presentation, while the others prepared a group speech about the posters.

In the morning, after putting some finishing touches on our group presentation, we did a practice run-through. Finally, we felt we were ready. A panel of five judges in the field of environmental science, including scientists and business owners, listened as we presented our plan and then asked us questions about it. Afterward, we all but sprinted outside to the fresh air. We felt we had done well, but we didn’t know for sure. We waited for the judges to announce the top five teams. We weren’t surprised to learn that we weren’t in the top five, especially considering that we were the only all-freshman team, but we were a little disappointed. We had hoped to place in the top 15, but in the end, we placed 33rd overall, finishing 23rd in the oral presentation and tying for 16th in wildlife.

The next day, my team traveled to Yosemite National Park. We climbed one percent of El Capitan, swam in 60° water (which was great after spending a week in Fresno, the driest and hottest place I’d ever been!), and visited the giant sequoias, among the largest trees in the world. This helped melt away all the stress, and even got us talking about next year’s competition. All in all, it was a great experience. I learned a lot, had tons of fun, and made some new friends. And in the end, we didn’t do too badly for the freshman team at Envirothon. **i**



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