NCW 2018: Chemistry Is Out of this World at United for Success Academy in Oakland

Readers of the Vortex know that the California Section kicked off its fall outreach program with the Solano Stroll in mid-September, where our booth featured the NCW 2018 theme activities, "Creating Oxygen to Breath in the Space Station" and "The Sun and Ultraviolet Light: Make Your Own UV Wristband." On September 27th we took these same activities and much, much more to Family Math/Science Night at United for Success Academy in Oakland, CA.

UFSA is an Oakland public school, one of two that share the facilities of the former Calvin Simmons Middle School on 35th Avenue in the Fruitvale district. Well over 100 students and family members turned out for a fun-filled evening that filled the auditorium. Cal ACS invited the Scientific Jam band to open the evening with their fusion of middle school science and rock 'n' roll – yes, these rockers are middle school science teachers in Livermore. We enjoyed a buffet dinner provided by the school while our volunteer teams arrived to set up their activities.

Among the first on the scene were James Gardner, ED for Association of Manufacturers Bay Area (AMBayArea) and JP Prahl of LBNL (and one of AMBayArea's manufacturing Ambassadors). They took over the darkened balcony, which was perfect for UV Wristbands as well as "Make a Glowing Sign" (using fluorescent markers) and "How Do We Know What Elements Are in Outer Space?" By looking through diffraction grating slides, students compared the spectra of different light sources. The auditorium's fluorescent lights were particularly entertaining, with five distinct color bands.

Meanwhile, Deanna Quon and the Chevron Slime Team were setting up down below, and the Alpha Chi Sigma team from UC Berkeley arrived to reprise “Creating Oxygen” (by electrolysis of water), along with two additional NCW theme activities, courtesy of the National Informal STEM Education Network and their fabulous “Let’s Do Chemistry” kit. They created “Sublimation Bubbles” using dry ice (the kind found on the polar regions of Mars) and helped kids launch “Rocket Reactions” with citric acid, baking soda, and water in small plastic vials. The plastic caps landed far and wide!

Your NCW coordinator set up the rainbow pH demonstration that combines red cabbage indicator with Milk of Magnesia. Adding vinegar shifts the color from green-blue to bright red, but continued magnetic stirring allows the Milk of Magnesia to neutralize the added acid. Visitors took turns adding acid or base, but everyone really wanted to add dry ice and create billowing clouds of fog.

The UFSA math and science staff organized a science fair and several other interactive presentations, and they also invited volunteers from BASIS/Community Resources for Science to coach students on building an amazing variety of wind turbines.

Of course, no science night is complete without liquid nitrogen ice cream (thanks to Alpha Chi Sigma for preparation and serving, and to AirGas of San Leandro for liquid nitrogen). Finally, many thanks to our volunteers, our hosts, and especially to UFSA science teacher Judy Greenspan for the warm welcome.


Family Math/Science Night
United for Succes Academy
27 September 2018
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Family Math/Science Night at United for Success Academy
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EXPLORE SCIENCE

The “Let’s Do Chemistry” kit from NISEnet was offered for free to 250 organizations that promised to organize hands-on chemistry events this fall. This kit is an entire science night in a box, with banners, gloves, goggles, games, and nine different hands-on chemistry activities, everything from “Chemistry Makes Scents” to “Let’s Build a Battery.” Some activities are familiar, while some are entirely new to us. All include instructions and colorful signage, and there will be many more opportunities to use them during the coming year. And, we would be happy to share them with local schools.

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