



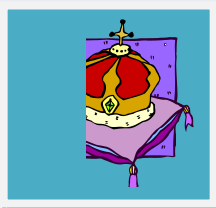




### Contents

-  Director's Message
-  Project News
-  Upcoming Events
-  Current Events

### Cool Chem Fact Did you Know?



## Platinum

### *Metal of the Kings*

For centuries gold was considered as the most noble element of the world, but in XVIII century King Louis XV of France declared, that platinum (78) will be now the metal for the kings. Platinum, because of its rareness was not able to satisfy desires of all sovereigns.

Still, the frame of the crown of Queen Elizabeth the Queen Mother was made of platinum and became the first British Crown to be made of that metal.

## Director's Message...



Dear Readers,

Summer came and went in the blink of an eye. We partnered with Industry Initiatives for Math and Science Education to provide three San Mateo County Chemistry High School Teachers the opportunity to participate in paid eight-week Summer research fellowships at Stanford University. We also supported Environmental Chemistry

curriculum development conducted by two additional High School teachers in the Summer.

We welcomed Dr. Melody Yang as Cañada College's Chemistry Outreach Coordinator. A new chemistry equipment loan program was designed to accommodate the diverse needs of our County's secondary education teachers. A variety of events and activities have been planned for the academic year. They include professional development to teachers at their high school sites, experiments conducted by our staff at high schools, field trips to local creeks and ponds to conduct environmental testing, chemistry activities at the Cañada College Chemistry laboratories, and guest speakers on campus. New partnerships have been developed with The Exploratorium and Stanford University - Chemistry Department. Through these partnerships, inquiry based hands-on chemistry activities will be brought not only to local high school students but also to a broader audience, including homeschooled students. We are also partnering with the Redwood City Library and the San Mateo Library to bring guest speakers and other chemistry awareness activities into the community.

Our new Chemical Laboratory Technology academic program is scheduled to start in the Spring of 2010 when the Introduction to Chemical Laboratory Technology, CHMT 310, course will be offered for the first time. This program was designed to complement the existing Chemistry program by adding two new specific courses and an internship. The focus of the program is to provide relevant hands-on instrumentation experience applicable to research laboratories. Students have the choice to pursue a certificate of completion, an Associate in Science degree in Chemical Laboratory Technology or transfer to four-year universities.

Please feel free to contact me at [medinaj@smccd.edu](mailto:medinaj@smccd.edu) with your questions or to learn more about our new program or our activities and events.

Jeanette Medina

### Volunteer Industry Partners Needed

We are seeking to establish valuable industry alliances to assist us with the development of an Associate in Science in Chemical Laboratory Technology degree and a Chemistry Laboratory Technology Certificate, a key object of our grant. Volunteers will be asked to assist with: 1) identifying crucial curriculum topics and hands-on exercises to assure that graduates of these programs are well trained on industry relevant instrumentation and can perform a quality job, 2) expanding student access to career opportunities in chemistry and chemistry-related fields, 3) identifying potential internships and on-site training opportunities for students, 4) building long lasting and beneficial alliances among the local industry, four year colleges, high schools, government officials and Cañada College. For additional information contact Dr. Jeanette Medina, Project Director at (650)306-3255 or (650) 306-3304, by email at [Canada.NSFGrant@smccd.edu](mailto:Canada.NSFGrant@smccd.edu).

## Employers Wanted!

If you are an employer who has  
Chemical Laboratory  
Technicians on your staff we  
would like to hear from you!

Please contact us at:

**(650) 306-3304**

email us at:

[Canada.NSFGrant@smccd.edu](mailto:Canada.NSFGrant@smccd.edu)

## Cañada College News

### Math Jam Success Story Student skips trigonometry thanks to Math Jam

Diana Valderrama was able to skip trigonometry and begin studying calculus during her first semester at thanks to the summer Math Jam. The Math Jam was one of several projects initiated at Cañada this year aimed at improving the interest, persistence and performance of underrepresented students in the fields of science, technology, engineering and mathematics. It was funded by a \$900,000 grant from the U.S. Department of Education. Participating in the Math Jam gave Diana access to personal tutors who helped her with a study plan. "I learned more in four days at the Math Jam than I did in three semesters at high school."

### Cañada Enrollment Snapshot

	Fall 2008	2008-09
Headcount	6,805	10,772
Total Enrollment	15,033	34,074
# of courses Offered	301	508
Average Student Unit Load	6.5	8.4
# of First Time Students (22% increase)	1,371	2,644
# of Continuing Students (55% increase)	3,761	6,135

## Project News:

### Chemistry Professor Jeanette Medina Earns Teacher-Scholar Award The award is the first of its kind in the nation.

Jeanette Medina, professor of chemistry, has won the first Teacher-Scholar Award for Community College Chemistry Faculty. The award, sponsored by the Santa Clara Valley section of the American Chemical Society (SCV-ACS), is the first of its kind in the nation. Although similar awards, some of them at the national level, are offered to outstanding high school chemistry teachers, there are no other community college awards that are based on the faculty member's discipline.

Faculty members from 13 community colleges in five counties around San Jose were eligible. Jeanette will receive a \$500 honorarium with another \$500 for the department at a special presentation in San Jose on Nov. 19. Tom Lane, President of the American Chemical Society, the largest scientific society in the world, will make the presentation. The award was established by the Santa Clara Valley section of the American Chemical Society earlier this year.

The initiative for the award and the first \$500 in seed money came from the National Science Foundation-funded ChemEd Bridges Project. The SCV-ACS local has allocated \$500 and other funds are expected to be raised from the membership. ChemEd Bridges provides professional development opportunities to expand the horizons and enrich the careers of community college chemistry faculty, encouraging more of them to become teacher-scholars.

### Chemistry Equipment Loan Program

To enhance chemistry education in local high schools, we have a variety of equipment available for borrowing. This equipment includes spectrophotometers, gas pressure sensors, a variety of environmental monitoring devices including ion selective probes, dissolved oxygen and CO<sub>2</sub> sensors, and many more. For a complete list and the procedure for requesting the equipment, please inquire about the *Cañada College Chemistry Equipment Loan Program*.

## Upcoming Events

### November 10, 2009 - Second Annual NSF Advisory Board Meeting at Cañada College Campus

A group of individuals from industry, government agencies and academia will again meet on the Cañada College campus to discuss issues pertaining to the creation of a the new program in Chemical Laboratory Technology that was submitted to and approved by the College's Curriculum Committee. This marks a significant step toward the goal of beginning to offer this program in Spring, 2010.

### October, 2009 - Chemistry workshops for home school students:

Beginning in October, 2009, we will be offering a series of fun and educational chemistry workshops for high school and middle school home school students at Cañada College chemistry laboratories. We are also partnering with the Exploratorium Home school Program by enhancing the Exploratorium Home school Series with technology-based lab activities!



For additional details about our grant go to the National Science Foundation Website at:

<http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0703188>



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## **Chemistry: A Pipeline to 21st Century Careers**

National Science  
Foundation ATE Grant  
#0703188

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We're on the Web!  
[www.canadacollege.edu/nsfgrant](http://www.canadacollege.edu/nsfgrant)

Newsletter archives can be found on the Photo Gallery page of the web site

## Events This Quarter

### September 10, 2009 – Forensic Lab Experiment, A Real Who-Dun-It!

Dr. Melody Yang, Chemistry Outreach Coordinator for our grant, developed a hands-on forensic lab for home school students conducted at the San Francisco Exploratorium. Lab equipment and supplies were provided by the grant free of charge. After several demonstrations the students were familiar with three techniques used in forensic investigations including water colors in the spectrophotometer, paper chromatography, and identifying their own fingerprint patterns. Then they were presented with a "who dun-it" narrative on the museum floor to introduce a crime that they were expected to solve. Much fun and learning was had by all.



### September 19, 2009 – GEMS (Girls Engaged in Math and Science) Workshop

Twelve Middle/High School students from the Morgan Hill School District visited Cañada College for an all day science workshop. The afternoon session was dedicated to Forensic Chemistry. Students were briefed on the process of crime scene investigation. They collected evidence and analyzed it using a computer interfaced visible spectrometer. The young sleuths unanimously identified the guilty suspect. Nine college students and three faculty members were there to interact and assist the girls.



### September 24, 2009 - San Mateo County Environmental Health Mobil Unit, Cañada College Campus

**William Lent**, brought his Mobil Unit Laboratory to the Cañada College campus to show our students how his chemistry degree serves him well is his role of as Hazardous Materials Program Manager for the San Mateo County Health Department, Environmental Health Services Division. Over 80 students attended this event. In addition, Mr. Lent brought the county **Fire Department Response Unit** with two representatives from the emergency response team. All three presenters demonstrated various chemical experiments that they perform in the field to identify and clean up hazardous materials when they respond to emergency calls or as part of their Department's regular ongoing effort to keep our environment clean and safe.

