



Community Resources for Science

practical support for great science teaching

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Zap! Whirl! Scientists Prepare to Share Lessons With Young Students

In a conference room on a Friday morning, nearly a dozen Bayer scientists and engineers take time out of their busy schedules to earnestly concentrate on blowing up water balloons through bendy straws, taping them to index cards with bottle caps for wheels, and watching them fly, all in the name of science.

The beneficiaries of this “research” will be classrooms of thrilled, eager 7 year olds.

This year, Bayer Pharmaceuticals is partnering with Community Resources for Science to extend their community impact beyond the medicines that have made them a household name. Bayer employees will be going into elementary school classrooms, armed with engaging lessons and materials to teach hands-on, interactive science.

“Bayer can do a lot of things in the community...and I wanted to be a part of that from the inside,” said Xonie Lloyd, a health, environment, and safety specialist in Emeryville who participated in this hands-on encounter with a balloon rocket car.

This enthusiasm and eagerness to get involved in the community is common on both Bayer campuses. Employees at Bayer Emeryville will be teaching Newton’s Third Law of action and equal and opposite reaction to second graders with the construction of balloon rocket cars. Employees at Bayer in Berkeley—via materials like Styro-foam plates, Plexi-glass, and tissue paper— will illustrate the seemingly magical capabilities of static electricity to fourth graders.

“I just really like young people...and the whole concept of getting them inspired about science,” Lloyd said.

Each Bayer teaching team has pledged to present their lesson in at least 4 elementary school classrooms this year. With over half a dozen teams formed after two months, the collaboration already has the potential of reaching hundreds of students in schools across the East Bay.

“I was so excited to join this program from the moment I heard about the opportunity. Having two kids of my own, I feel more



Eager first graders participate in a CIC activity.

than ever, that actively getting involved in our youth's education is the best way to promote enthusiasm and get kids excited about learning,” said Laura Humphreys, an assistant process engineer at Bayer in Berkeley. “Having outside speakers, such as Bayer employees, coming in to schools to teach helps to add a valuable outside perspective to what the students are learning in school.”

A meeting room table strewn with straws, bottle cap wheels, or scraps of statically charged fabric provides a reminder for these scientists of their own foundational wonder for science—the excitement of that ah-ha! moment.

CRS scientist volunteers are motivated by the indisputable power of real-life scientists in the classroom shar-

ing a love of science and serving as role models.

“As a post-grad of science and as a parent who is involved in the Berkeley public school system, I see a huge opportunity for local biotech and pharma to reach out to the young children at the elementary schools, teach them about the fun of science, and how it can connect to their daily life,” said Angela Byrne, a Bayer senior manager in quality assurance. “Hopefully this will encourage more students to take science further in their career,” she added.

Garden Delight: Teachers Explore Resources, Share Experiences at Fall Social



Foods of the Americas, docent-led garden tours, and school garden conferences were just some of the resources teachers learned about at the Fall CRS Science Resource Social, hosted at the **UC Botanical Garden at Berkeley** in October. Teachers had a chance to enjoy refreshments on a glorious fall afternoon while networking with peers. After a brief presentation about CRS services and UC Botanical Garden resources, teachers enjoyed self-paced tours of the fall Garden.

For more information about programs at the Botanical Garden, including class field trip visits, resource materials for teachers, and more, visit <http://botanicalgarden.berkeley.edu/> **Thanks to our hosts!**



Be CuRious: Mining in the News & in Your Classroom

The heroic rescue of the Chilean miners has us thinking about the science and history of mining in California and around the world. NOVA just released an hour long documentary about the rescue of the 33 men who were stranded more than 2000 feet (1/2 mile) underground for 69 days. You and your students can watch online at <http://www.pbs.org/wgbh/nova/tech/emergency-mine-rescue.html> The show features the drilling and some of the nutritional and emotional issues faced by the miners.

Closer to home, you can explore California's gold mining history by taking a fieldtrip to The Oakland Museum (www.museumca.org). Learn about panning for gold and the open-pit mining done in California by going to Coloma where the Gold Rush began - Marshall Gold Discovery State Historic Park (http://www.parks.ca.gov/?page_id=484). Black Diamond Mine Regional Reserve in Antioch (www.ebparks.org) is the site of the first and biggest coal mine in California. When the coal ran out, they mined sand for glassmaking. In San Jose you can visit the Almaden Quicksilver County Park (<http://www.sccgov.org/portal/site/parks/>) and explore

its history of Mercury mining. People coming to California to find gold and silver instead discovered Borax in Death Valley and the surrounding areas.

http://www.nps.gov/history/museum/exhibits/death_valley/mining_ranching.html

There are so many different natural resources that are mined in the US and around the world from rock salt to coal to every kind of metal imaginable. Some mines are huge open pits and others are holes and tunnels leading deep underground. The Mineral Information Institute (www.mii.org) offers a wealth of information on all types of mineral mining in the United States. <http://geology.com/> has maps, articles and more about all aspects of geology.

Wanting more information on a mining topic or some other science topic? Send your request to CRS@crscience.org or log-on to our self-service portal and database at <http://www.crscience.org/database/>

For an online version of our newsletter, with 'clickable links' to the websites mentioned above, go to www.crscience.org/newsletter

CIC Spotlight: 2010-11 Kick-Off!



Current and new Community in the Classroom volunteers peruse photos, letters, and other program information at the CIC Fall Kickoff in October. Campus Coordinators Kristen Seim and Leah Witus have helped recruit over 60 new CIC volunteers from many departments this fall! These scientists are eager to start visiting classrooms – and with over 250 teacher requests for CIC presentations already this year, we're excited to have these new scientists onboard! Thank you Leah, Kristen, and CIC Volunteers!

We are pleased to announce that for the 2010-2011 school year, CRS was selected out of a highly competitive pool of 67 proposals requesting a total of almost \$2 million in funding, to receive a grant from the UC Berkeley Chancellor's Community Partnership Fund. The awards recognize programs that "significantly enhance the quality of life in Berkeley while strengthening partnerships between the university and community." Over 440 classroom lessons have been taught in Berkeley public schools by CIC volunteers during the past three years!

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Fall Greetings from CRS

Greetings to our teacher members, our scientist volunteers, our funders and donors, and our partners in science education and outreach!

CRS is flying out of the starting gate of the 2010-11 school year with a strong lead on meeting our ambitious strategic plan goals of increasing the number of teachers and students served and the number of scientist volunteers involved in sharing their love of science.

Science education has never been more important. We're fortunate in the Bay Area to have a wealth of science resources. CRS is dedicated to connecting schools with those resources for the benefit of teachers and students.

Can you remember the first time a scientific experience wow-ed you? What sparked your own curiosity about the world in which you live? Have you ever tried to teach a basic scientific idea to a six year old?

Science is in the news every day, amazing us, surprising us. New discoveries, unbelievable accomplishments happen at an increasingly dizzying pace. Together we are nurturing a love of science and learning in a new generation – the generation who will serve as the doctors and engineers, policy makers and explorers in the not-so-distant future. Thanks for joining us!

In the words of the students themselves: *Thank you for coming to our classroom and doing experiments. That was most definitely the coolest science lesson I've ever had!*

Thank you for coming and teaching us so much about elements. I thought this was really fun and I love science now.



Community Resources for Science

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CRS 2009-10 Results by the Numbers

- Served **500** teachers, impacting classroom learning for 12,000 students.
- Responded to **700** teacher requests for CRS support in the form of field trip information, classroom enrichment, lesson activities, websites, etc.
- Worked with **over 200 scientist volunteers!**
- Reached over 5,000 students with more than **200** Community in the Classroom presentations.
- Teachers report being “more informed about science resources” (**87%**), “more confident” about teaching science (**75%**), and that their students respond positively to science experiences (**97%**)
- Our 2010-11 goals are even more ambitious!



Teachers, We're At Your Service

At CRS we specialize in finding science resources for your classroom, cutting through the clutter to get you the information you need, when you need it.

We connect with all the Bay Area science support organizations to make sure you have the most up to date information about fieldtrips, in-class programs, professional development opportunities, summer institutes, program deadlines, grant opportunities, websites, materials and more. We'll do the research so you don't have to!

Make sure we have your current email so you'll get our monthly email updates, too.

To make a request, go to

www.CRScience.org

or email your request to us at

CRS@crscience.org

Give the gift of CRS membership to a fellow East Bay teacher!

Memberships for individual teachers are \$20 per year. Call, fax, or email us and we'll get you started!

CRS TEAM: Connecting Teachers and Students with Science Resources

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