As a kid, Gautham Venugopalan spent hours tinkering and helping his dad build things. Richard Novak remembers a childhood spent outdoors, coming home muddy and with salamanders in hand. Today these two adventurous scientists are Community in the Classroom volunteers, sharing their enthusiasm for science with elementary students in the East Bay – and around the world. In addition to their CIC efforts, Venugopalan and Novak also bring their science passion, along with relevant and accessible science experiences, to children in the developing world.

Venugopalan began volunteering three years ago, as a new graduate student at UC Berkeley, after learning about CIC from one of his professors who was himself a volunteer as a Cal graduate student. These days, Venugopalan has taken on a leadership role as a member of the CIC campus steering committee, a group of graduate students who help deepen the program’s connections at Cal and give voice to the campus’ more than 150 volunteers. Novak decided to get in on the action himself last year after seeing how much fun his colleagues were having in elementary classrooms.

Both scientists have a natural gift for getting kids excited about science. Novak has developed a life sciences lesson for fifth graders irresistibly titled, “Please Play with Your Food,” in which students use yeast to compare the sugar content in various juices. By making use of balloons to capture the gas produced by the yeast as they digest the juice, the students can see with their own eyes how much sugar is being consumed.

This year, the two have teamed up to teach Venugopalan’s wildly popular “Optics and Light” lesson. They have third grade students create tiny magnifying lenses from water droplets and use water to refract light and make a penny disappear - as Venugopalan describes it, “a great magic trick sure to impress friends and family.”

Now, they’re taking their commitment to science education to new frontiers. Last year, Novak and a group of his fellow graduate students started Future Scientist, a student-led organization that intertwines science education with development projects in the developing world. The organization was founded on the premise that “cultivating knowledge in the sciences and combining it with technical training enables resource-poor communities to sustainably address their own needs.” During its first year, Novak, Venugopalan and others traveled to an orphanage in Puerto Alegria, Peru, where they taught practical, hands-on lessons on solar energy, water filtration, and more – in Spanish. They also installed solar panels that now provide sustainable energy to the orphanage.

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**Teachers, We’re At Your Service!**

CRS is your “Science Consierge.” At a hotel you go to the front desk to find out where to get a good meal or which theater productions are in town. 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.

It’s easy as going to our website www.CRScience.org or emailing your request to us at CRS@crscience.org

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Teachers send us stories of how CRS has made a difference in their teaching. One recent note from Washington Elementary Kindergarten teacher Denisia Wash:

I find that in kindergarten I get so caught up on getting my students to read and write as the district pushes these goals for us. CRS is great because it consolidates all these great science programs and classes for us to find in one place. It updates me on the important things happening in the science education world and will alert me to classes I can bring to my students.

I have just discovered CRS’s potential to help me in the last two years of teaching, and their services have encouraged me to do more science based learning in my classroom. For example, I was alerted to a class on germs for my students led by UC students. The germs class was excellent for my students, and I extended the lessons learned from them with my students for weeks.

Bring the Earth Science news headlines into your class for some exciting real-world connections! In the last few months we have seen earthquakes shake the ground in Haiti, Chile, Mexico, and China. A volcano in Iceland filled the sky with ash, timed neatly to the 30th anniversary of the explosion of Mount St. Helens. And, efforts to clean up a gigantic oil spill in the Gulf of Mexico demonstrate dramatically how scientists come up with a theory, test it out, and then have to go back to the drawing board and try again!

Here are some sites to add real-life context to your science lessons:
- Oceans, Oil exploration, Oil Spill cleanup: http://www.archive.org/details/NasaSciFiles-TheCaseOfTheOceanOdyssey
- Earthquakes (a treasure trove of kid-friendly information from the USGS): http://earthquake.usgs.gov/learn/kids/

Be CuRiouS: Earth Science in the News!

Time for Thinking About Teaching

Time is a precious resource, particularly for teachers. During the 2009 – 2010 school year, CRS facilitated collective meeting time for all 4th and 5th grade Science Resource Teachers in Berkeley schools to meet and plan together.

Led by CRS co-founder Nicki Norman, this year-long effort provided teachers the opportunity to collaborate around science teaching, charting a critical common path through the dense thicket of science standards and curriculum. The goal of this collective time and effort is increased coordination among the Science Resource Teachers (who together teach every 4th and 5th grader in the district), and greater integration with classroom teachers and subjects.

Getting new SRTs up to speed regarding the equipment, curriculum tools, and other resources available was a top initial priority. Then the group dove into content units, focusing first on Earth Sciences and then mapping out units in the Life Sciences. These efforts included reviewing activities, exploring online resources and lesson demonstrations.

The group explored solutions and support for everything from Berkeley’s Science wiki to the challenges of a cart-based teaching model in which teachers travel from classroom to classroom. CRS looks forward to building on this foundational work in the coming year.

Intern Opportunities

Great opportunity! We provide our interns with the chance to shine. Take responsibility for specific projects (program support, web development, survey administration, events) – we put you in charge and give you the tools to succeed. Looking for responsible volunteers, able to commit 4-10 hours per week, flexible schedule; 3 month term or semester. We’re happy to complete paperwork for course credit if needed.

Contact us: teresa@CRScience.org
CIC Spotlight: Going Global (continued)

Continued from page 1

For this past year, they refined the program making a point to "provide obviously practical projects as a deployment method for our science lessons so that people could see the benefits of the education program," says Novak. They worked with Project Amazonas, a Peruvian/American non-profit, to develop biogas digesters made to withstand – and sustain – the Amazon environment as the focal point for applied scientific lessons.

Both Venugopalan and Novak remember having a strong scientific curiosity from an early age, and it’s precisely this curiosity that they hope to cultivate with their teaching. "As a kid I liked ‘helping’ my dad build things around the house," recalls Venugopalan. "Now I get to build instruments and make little tissue samples to study. It's like grownup versions of building Lego castles and making Jell-O."

As a child, Novak remembers spending "several hours each day wandering the forests, creeks, and swamps near my house. I would often come back totally muddy and wet, usually holding a snake...completely happy." Nowadays, "[CIC] allows me to show kids and the teachers who might be hesitant that there is nothing to be afraid of. It's an excuse to have a fun time looking at how the world works."

Venugopalan and Novak exemplify the passion, commitment, and generosity shared by CIC volunteers. To learn more about Future Scientist visit http://futurescientist.org/.

Richard Novak captures students’ attention.
CIC Voluntees Light Up the Exploratorium After Dark

CRS’ Community in the Classroom and MASERS program volunteers donated over 800 hours of time this year bringing real hands-on science and real, stereotype-bucking scientists right into the classroom. It was a banner year for CRS volunteer presentations, and we wanted a special way to say “thank you” to our devoted volunteers. We’re so grateful that San Francisco’s Exploratorium generously stepped up and hosted our end-of-year Volunteer Thank-You Event during their After Dark party May 6.

Dozens and dozens of dedicated volunteers shed their lab coats and enjoyed an evening of science, art, cocktails, socializing. As an added bonus, they got to sneak a peek at the changes in store for the museum when it moves to the Embarcadero in 2012.

Highlighting the festive evening was the opportunity to shine a spotlight on some of our most outstanding volunteers. First, we recognized the efforts of the many team leaders whose tireless organizing has allowed the program to grow on campus from five to well over 150 volunteers in just six years. Team leader Laura Miller and the rest of her Sarpong Lab Group at UC-Berkeley got a special thank-you for making the greatest number classroom visits this year – twenty-one!

Second, we celebrated the CIC Steering Committee members and their insightful leadership of the program on the Cal campus. Steering committee members at the event included Gautam Venugopalan, Ailey Crow, who was also the longest-serving CIC volunteer in attendance (five years!); and Andy Tsai, who organized countless lessons, outreach opportunities, and on-campus connections this year. Finally, we lauded the outstanding work of CIC intern Vanessa Braunstein and MASERS program coordinator Janice Sheldon.

Other special recognition and appreciation was expressed for CIC Steering Committee members Celeste Chavis, Rebecca Abergel, and Anna Simonin; Stavroula Hatzios, who has given much during her years as CIC Campus Liaison; and Professor Bob Bergman, a CRS board member who helped establish CIC at Cal.

The evening was made possible with the generous support of Anne Jennings, CRS’ co-founder and board member, bringing the volunteer program she developed together with her new role as Relocation Program Manager at the Exploratorium. Thank you, Anne! And, thank you volunteers!