We do this every day: Inspiration in the classroom

Every school year our mailbox and our email inboxes are flooded with letters, pictures, and cards from the students and teachers who receive BASIS volunteer lessons. We have seen many science journals, portraits of BASIS scientists, and diagrams of solar cell cars and flowers. We also hear from scientists about the joy of sharing science with children. Here is a story we would like to share:

As told by Miriam Bowring, Chemistry PhD Candidate, Bergman/Tilley Lab, former classroom teacher, and long-standing BASIS volunteer

Three of us chemistry graduate students, Kurt, Willie, and I went to Aija Simmons’ class in Oakland. It was clear to us from the moment we opened the door that Ms. Simmons is an outstanding teacher, because she was whispering to a classroom full of fifth graders about grammar and they were paying rapt attention.

As we started our lesson, the students were remarkably well-behaved, while their scientific curiosity was unchecked – it is not easy to teach ten-year-olds how to follow behavioral rules but question the world unrelentingly.

The students were asking and answering questions confidently. One tiny girl named Marvelle* was especially astute, coming up with the theory of surface tension based on her own experiments with a cup of water and a piece of pencil lead.

I asked my typical two questions: “What do you see? Why do you think that happened?”

Marvelle spoke quickly, “Well, the pencil lead falls through the water when you put it in vertically but it floats when you put it in horizontally. That must be because all of the weight of the lead rests on just a few water molecules when it’s vertical, but when it’s horizontal, the weight is spread out.”

Ms. Simmons participated with excitement in the scientific experiments alongside her students. In the next experiment, we offered the students droppers of oil, water, and soap.

Marvelle saw that the oil and water did not mix, but when she added soap, they did. Once again, she quickly deduced the molecular underpinnings. “Now I need to see what happens when I do just oil and water, just soap and water, and just oil and soap,” she told her lab partner.

At this point, I turned to Kurt and put my hand on his shoulder. He looked at me, tears in my eyes, and asked what was wrong.

[Continued on page 2]

*student name has been changed

Above: Students working on the Chemistry of Soap lesson in an Oakland classroom

Attention Teachers!

This spring, in an effort to go green the CRS Science Resource Guide is only available online.

Go to www.crscience.org/ResourceGuideMay12.pdf to find information on:

- Field Trip & Program Deadlines
- Grant Deadlines
- Professional Development Opportunities
- New Science Exhibits

Don’t have time to check out the resource guide right now? Bookmark it and come back later!
The rain poured down on a gray March afternoon, but it didn't dampen the spirits of the teachers who came to the Lake Temescal Beach House to meet with CRS support staff and to learn about the educational offerings of the East Bay Regional Parks. Naturalists from each of the Nature Centers shared artifacts and adorable animals while providing information about their many services and programs.

David Zuckerman, Tilden Park Naturalist (pictured above and right with Nancy Kaiser), treated us to a slide show about the history of the East Bay Regional Parks District (a brave undertaking in roomful of 3rd and 4th grade teachers who know their Bay Area and California history!).

Kudos to Anna Henry from Crocker Highlands, who used our Field Trip for Teachers as a chance to meet with her group of new Oakland Kindergarten teachers; they networked and even welcomed new Kindergarten teachers from other districts into their conversation. If you have a networking group in your district, please invite them to attend our next Field Trip for Teachers together! In addition to light dinner, wine, raffle prizes, and networking, these events provide a chance to ask questions, request support, and share ideas.

Inspiration in the Classroom
[Continued from Page 1]

“This girl is just so smart!” I whispered.

As we packed up our supplies to leave, Marvelle tugged on my sleeve.

“Miriam? Will you sign your autograph? I want to show my mom! She'll be so happy.”

I wrote, “I hope you become a scientist,” and signed my name.

Ms. Simmons asked us, just as we were walking out the door, if we could tell the class specifics about our own research projects. No teacher had ever asked us this before. I went first, then Willie – the students were polite and interested. Finally it was Kurt’s turn and he blew us all away. He was able to describe his research on water oxidation catalysts in such a way that the entire room of fifth graders was convinced it was the coolest and most important thing you could do.

We finally made it out of the room after that, but the inspiration I got from Marvelle, Ms. Simmons, and Kurt will stay with me throughout my career as a scientist.

CRS By the Numbers

So far during the 2011-12 school year:

874 teacher members, working with over 21,850 students in 92 schools
409 scientist volunteers who have made 400 lesson presentations resulting in 1,200 role model interactions with over 10,000 students doing hands-on science for a total of 2,100 + volunteer hours

[Image of a group of teachers and naturalists at Lake Temescal]
What do you want to be when you grow up? A simple, yet profound, question that young children face on an almost daily basis. And, for most, the answer they blurt out is drawn from either their family circle or popular celebrity culture.


Yet, few children giving these answers are actually thinking about the nature of the work involved, the tasks performed, the training required. Rather, young kids are really answering the question: “Who do you want to be when you grow up?” So, naturally, they think about the people they know, or the people they have become familiar with on television and the movies.

Rarely do children answer: a chemist, an engineer, a biologist.

That’s why it is critically important to provide children with a wide variety of role models, including those who reflect the skills, training, and qualities of critical thinking that will be essential for the future job opportunities awaiting today’s children. Those jobs increasingly include scientists of all disciplines, engineers, and technicians with solid math skills.

Throughout the school year, CRS sends diverse, enthusiastic, dynamic scientist role models into local classrooms. They do standards-based “real” science with students, and provide support to teachers. But an equally important role they play is to pop the thought bubble that appears in many children’s minds when they hear the word “scientist.”

Children ask questions about what the scientists study in their labs, what kinds of science activities they loved as kids. They’re particularly impressed when graduate students share that they are in “21st grade!” They see that scientists can be young, diverse, humorous, and fun.

The post-visit thank you letters that flow into our CRS mailbox for the scientist volunteers contain delightful drawings and countless versions of the following message: “Thank you for visiting our class and talking about what you do in your lab. Now, when I grow up to become a scientist I’ll know just what to do!”

We salute our BASIS scientists who together this school year will have made over 1,200 appearances in local classrooms, inspiring children (and their teachers), and providing one more possibility in the minds of youngsters the next time they are called on to answer the question: What do you want to be when you grow up?

--From the ED
CRS is pleased to honor PLACE@Prescott Elementary School in Oakland as our 2011-12 Science Super Star School! In recognition of the commitment of every teacher at PLACE@Prescott to including high quality science learning experiences for all students, we are happy to award them our top prize: A day-long visit from the East Bay Regional Park’s Mobile Aquarium (aka “The Fish Mobile”!)

Congratulations to these excellent teachers, and their students, for meeting the Challenge requirements:

- Soraya Brooks
- Janina Brown
- Constance Cobb-Zunino
- Cicely Day
- Linda Fox
- Adriana Guadarrama
- Lorraine Mann
- Zerita Sharp

“The Science Super Star program initiated by CRS this year was a wonderful galvanizing tool for the staff at my school. We all jumped into the challenge, and the result was a huge increase in the amount and quality of science education offered to students at every grade level this year.”

--Lorraine Mann, Kindergarten teacher and lead science teacher at PLACE@Prescott

We are also pleased to recognize these individual teachers and their students as 2011-12 Science Super Stars:

- Kristine Fowler, Berkeley Arts Magnet
- Anna Henry, Crocker Highlands Elementary, Oakland
- Allison McGuirk, Lincoln Elementary, Oakland
- Ashley Rockett, Grass Valley Elementary, Oakland
- Betty Yee, Lincoln Elementary, Oakland

CRS is delighted with the photos, science journal entries, and other samples of science learning and critical thinking in action that we have received from these classrooms! Each of these teachers will be receiving an awards package, including goodies such as field trips, museum passes, Flip video cameras, books, and science kits, to keep the science learning going!


**Look out for next year’s challenge directions and posters in the Fall!**
CRS Advisory Council: Enhancing Science Education

Talented and motivated people and organizations working together can make real change. This belief led to the formation of the CRS Advisory Council, and in our first year the results have been impressive. This group of dedicated thought leaders looks for ways to combine mutual strengths to increase the quantity and quality of science learning opportunities for local students.

The Council has focused on three main areas: supporting teachers, supporting and engaging principals, and promoting the importance & “coolness” of science & science education.

As a result, CRS has: created the Science Super Star program (see page 4), augmented online resources for teachers and scientists, established social media networks for sharing information, strengthened partnerships, identified curated video and online resources for teachers, expanded teacher/scientist connection efforts, reached out to more pre-service teachers, and participated in the wildly successful Bay Area Science Festival.

In April, Claudio Vargas led a discussion about what principals need in order to support a school culture of science learning. Claudio, who coordinates elementary science for Oakland Unified School District, described the shared professional learning time that OUSD elementary principals have had this year. He emphasized the importance of understanding that “high quality science instruction” includes engaging hands-on elements and opportunities to “make meaning” from those experiences through other subjects and projects.

We’re excited to begin work with the help of the Council members on the next action steps, including developing new materials and video tools for principals and new ways to build on the teacher-scientist connections we help to jump-start.

Want to learn more? Go to www.crscience.org/about/advisors

Please help keep science thriving in local schools!

Consider these examples of what your donation could do this year

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$75</td>
<td>One science visit to a class of 25-30 students</td>
</tr>
<tr>
<td>$100</td>
<td>Customized support for 10 teachers, impacting science learning for 250-300 students</td>
</tr>
<tr>
<td>$250</td>
<td>Training sessions for 10-15 volunteers</td>
</tr>
<tr>
<td>$500</td>
<td>Field Trip for Teachers Event</td>
</tr>
<tr>
<td>$1,000</td>
<td>Workshop stipends for educators</td>
</tr>
<tr>
<td>$1,500</td>
<td>“Day of Science” event for the entire 6th grade at one school</td>
</tr>
</tbody>
</table>

To make a donation, go online to www.crscience.org/donate OR mail your check and the form below to: Community Resources for Science / 1611 San Pablo Ave. Suite 10 B / Berkeley, CA 94702

Name:__________________________________________________________

Address:_________________________________________________________________________________

City/State/Zip:__________________________________________________________________________

Phone:_________________________Email:___________________________________________________

I/we would like to be acknowledged as follows:________________________________________________________________

To honor a specific teacher, please tell us his/her name, school, and address:__________________________________________________________________

Above: Example of student work submitted as part of the Science Super Star program

Above: Moon Phases

Scientists

Date

Record observations of the moon

Above: Example of student work submitted as part of the Science Super Star program
Thank you 2011-12 School Year Partners, Donors & Supporters

Foundations:
Amgen Foundation
Bayer Healthcare
Berkeley Public Education Foundation
Bernard E. and Alba Witkin Charitable Foundation
Callison Foundation
Cisco Systems Foundation
Cliff Bar Family Foundation
Clorox Company Foundation
Dreyer’s Grand Ice Cream Foundation
Irene S. Scully Foundation
Joseph R. McMicking Foundation
Lawrence Berkeley National Laboratory
S.D. Bechtel, Jr. Foundation
Safeway Foundation
The Dean Witter Foundation
The Lowell Berry Foundation
UC Berkeley Chancellor’s Community Partnership Fund

In-kind Donations:
Acme Bread Company
Berkeley Bowl West
Books Inc
California Academy of Sciences
Corwin Press
East Bay Regional Park District
Exploratorium
FULCRUM Books
Macmillan Children’s Publishing Group
Nomad Communications/Nomad Press
Powell’s Sweet Shoppe
Rainbow Grocery Cooperative
Rock Steady Juggling
Tacubaya
The Gardener
The Pasta Shop
Treehouse Green Gifts
Trader Joe’s Berkeley

Individuals
From $500 +
Kathy Armbruster
Paul Bartlett and Yumi Nakagawa
Robert and Wendy Bergman
Nancy Blachman and David desJardins
Anne Jennings and Andy Stacklin
Susan Katcheer
Adela Pang

From $250 to $499
Rachel and Jonah Jackson
Sung-Hou and Rosalind Kim
Jan and Maria Leeman
Elna Norman
Nicki Norman and Peter Gleick
Deborah and Marshall Wais
Drs. Myra and Burton Wise

From $100 to $249
Kurt Van Allsburg
Terese Barnett and Chris Ungson
Carolyn and Monica Bertozzi
Leonard and Marlyce Bjeldanes
Joh and Sharon Brauman
Elisa Calimano
Joseph and Susan Cerny
Christian Crumlish
Justin and Kirsten Curley
Graham Fleming & Jean McKenzie
Alan and Barbara Ginsberg
Kate Godfrey
David and Helen Golden
Josh Gutwill
Clayton Heathcock
Angelica Stacy and David Hodul
Sally and Ted Jennings
Irene and Kiyoshi Katsumoto
Jack and Birthe Kirsch
Amy Lee
William Lester Jr.
Piper Lomax
Lauren Luke
John McCarthy and Kathryn Barnhart
Greg and Ruth Morris
Nancy Morton
Carmen Murray
Dan Murphy
Dr. and Mrs. Phil Nishino
Alex and Ditsa Pines
David Pontecorvo
Alan Poon
Laurel Przybylski
Ziad Saba
Kathy Selleck
Rob Semper
Herbert Strauss

From $50 to $99
Sara Armstrong
Byron and Kay Brown
Suzanne and Gordon Chun
Robert Connick
Denise Davila
Kirk Smith and Joan Diamond
Joe and Liza Eto
Kurt Feichtmeir
Patti French
Jane Frommer and Steve Boyer
Susan Henderson
Alice Krasinski
Gloria Kwei
Steve Leone
Briggs Nisbet
Marilyn and Dan Smith
Christina Tarr
Claudio Vargas
David and Susan Wight

Up to $49
Susan Bellone
Beatriz Brando
Nicole Cheslock
Shumit Dasgupta
Molly Fraker
Susan Helmrich
Linda Hunter
Jesse Jenkins
Penny Jennings
Sherry Johnson
Miles Johnson
Linda Kekelis
Benjamin Kriegel
Sandra Laursen
Kathryn Lui
Robert MacDonald
Katie McKinstry
Aaron Reaven
David Stronck
Rachael Suczek
Diana Velez
Jane White

Left: Students learning about how plant stems transport water at a Family Science Night in Oakland. We were happy to help plan and deliver science experiences to the school community under the guidance of the lead science teacher, Kate Gallagher, and really enjoyed the time with students, their parents, and siblings shared during the event.

Learn more about BASIS scientist volunteers: go to http://www.crscience.org/volunteers/volunteerspotlights
Ever wonder what our scientists are doing when they’re not in classrooms?

Soomin learned about BASIS through the CalTEACH program and wants to become a health educator after she graduates with her Bachelor’s degree.

Ashley taught science in elementary schools in Indonesia through a Fulbright Fellowship and is pursuing her PhD studying nanomaterial at UC Berkeley.

Gautham and Richard started the nonprofit, Future Scientist in addition to their PhD studies.

Learn about Soomin, Ashley, Gautham, Richard, and more BASIS volunteers at http://www.crscience.org/volunteers/volunteerspotlights

Left: BASIS Campus Coordinator and Steering Committee member, Leah Witus, smiling for the camera in lab, where she is finishing up the research toward her PhD.

---

Celebrating Childhood Dreams: BASIS Volunteer Appreciation

On a breezy Sunday evening, nearly one quarter of this year’s BASIS volunteers gathered at Clif Bar Headquarters in Emeryville to mingle, enjoy refreshments, meet fellow volunteers, and celebrate their childhood dreams. Along with the raffles, games, photo booth fun, and plentiful ice cream, we were honored to acknowledge several of our outstanding BASIS volunteers for their work this school year:

**Miss and Mister Congeniality**
Katie McKinstry and Arunan Skandarajah

**Greatest Number of Visits this School Year:**
*Big Team:* ESO, Lisa Fernandez & Sarpong Team
*Small Team:* Jessie Atterholt & Elizabeth Ferrer

**Teaching Greatest Number of New Teachers:**
Lisa Fernandez

**Moved to Tears Greatest Number of Times:**
Miriam Bowring and the Bergman Team

**Most Stoically Invisible:**
Seychelle Vos & the Germs and Your Body Team

**Most likely to crash your meeting to tell you about BASIS:**
Leah Witus & Kristen Seim

**How to Think Like a Scientist Evangelists:**
Kim Sogi, Brendan Beahm, Bertozzi Group

**Most Likely to Perform an Encore of the Build a Bug Song:**
Chris Bell and Scott Collins

Thank you to Clif Bar, Dreyer’s Grand Ice Cream, and Berkeley Bowl West for making this event a success!

Right: BASIS volunteers enjoy refreshments while mingling to learn about each others’ favorite science activities as kids and fill in Bingo raffle sheets with the responses

Want to see more photos, connect with peers, share classroom visit advice? Join the CRS BASIS Volunteers group on Facebook: http://www.facebook.com/BASISvolunteers
Community Resources for Science

1611 San Pablo Ave. Suite 10 B
Berkeley, CA 94702
(510) 527-5212 • www.crscience.org
Tax ID #: 94-3262587

CRS Team: Connecting Teachers, Scientists & Providers

Staff
Teresa Barnett
Executive Director
Sandra Lee-Takei
Manager, Volunteer Recruitment &
Education Outreach
Ralitza Zikatanova
Manager, Communications & Coordination

Program Support
Corinn Brown
Manager, Teacher Services
Michelle Krenstein-Schorr
Bayer Project Coordinator
Kristen Seim & Leah Witus
BASIS Campus Coordinators
Janice Sheldon
BASIS/MASERS Coordinator
Lisa Wahl
Development

Board Members
Susan Kattchee
President
Lauren Luke
Secretary
Adela Pang
Treasurer
Robert Bergman
Justin Curley
Anne Jennings
Nicki Norman
Claudio Vargas

Left: Second grade students in a Berkeley elementary school learning about gears and torque

Like us on Facebook: facebook.com/crscience
Follow us on Twitter: twitter.com/crscience
Find us on Flickr: flickr.com/crscience
Watch on YouTube: youtube.com/crscience1