



Community Resources for Science News

Weaving connections among teachers, students & science in the Bay Area

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Newsletter, Fall 2012

Outdoor & Marine Explorations: Fall Field Trip for Teachers



Above: A Berkeley teacher faces off with a mountain lion at the NatureBridge Skulls & Skins Lab.

We were greeted by the smell of coffee and homemade cinnamon pop-overs as we arrived for the Fall CRS Field Trip for Teachers, hosted by NatureBridge at Golden Gate National Recreation Area on a lovely Saturday morning in September. After some time to eat, network, and browse through the free books and materials CRS brought as giveaways, teachers were treated to a tour of the NatureBridge facilities to better imagine what a field trip with students would be like.

The first stops on our tour were the indoor learning labs. These labs are full of materials for hands-on exploration to introduce and reinforce the outside lessons students do at NatureBridge. The marine lab has a tide pool touch tank that is long enough for a whole class to get their hands wet. The specimen lab has skulls and taxidermied animals that allow students to get up close and personal with California wildlife in order to look at different

animal adaptations, and a microscope lab allows for close examination of fascinating plankton and other critters.

The historic Fort Conkrite barracks are used as they were originally designed, as dorms, and provide dry, warm sleeping facilities for student groups, big or small. The dining room offers fresh, homemade food and views of the lagoon and ocean beyond.

After exploring the NatureBridge facilities, we wandered up the hill for a tour of the Marine Mammal Center. Their guide led us through some of the hands-on activities used to teach about the patients in the care of the Marine Mammal Center, including California Sea Lions. The tour guide explained about the Center's onsite and in-class programs, including the popular Whale Bus that brings

marine mammal specimens and hands-on education directly to school sites.

To find out more about NatureBridge visit www.naturebridge.org and more about The Marine Mammal Center go to www.marinemammalcenter.org



Above: Teachers and NatureBridge staff explore the wealth of critters in the Tidal Pool Labs

Advisory Council on Science Education: What is Evidence?

Many pundits, researchers, and observers of modern culture point to political campaigns, media sensationalism, and social networking and ask in despair: Are we living in a “post-fact” society? Just how do we know what we know, and more importantly, how do we teach students to think critically? These are some of the weighty questions our esteemed Advisory Council members considered when they met in September.

The conversation focused on the topic of “evidence” (something that will become increasingly important elementary grades with the transition to Common Core standards). The group examined strategies for evaluating evidence, the importance of activities that allow students to practice identifying claims and the evidence presented (or lacking) to back those claims, and the importance of students having experiences with gathering and sharing data.

Together, the Council identified several action items that CRS will be working on during the course of the coming year, including developing and highlighting tools and resources for teachers, and sharing activities that allow students to identify, evaluate, and communicate about scientific claims.

The Council members identified some great resources for teachers and students, including:

- A book for educators: Questions, Claims and Evidence by Lori Norton-Meier, Brian Hand, Lynn Hockenberry and Kim Wise

- Reliable source for science information for teachers/students: www.Sciencenewsforkids.org

- The entire *Understanding Science* website (<http://undsci.berkeley.edu>) is a treasure trove of information, resources, and activities. In particular:

- 1) A toolkit for teaching about untangling scientific claims and messages in the media (click through each “next” page to see details about each of the elements on the toolkit checklist, with great teaching examples (<http://bit.ly/UndsciToolkit>))

- 2) A pdf file of the questions for evaluating messages (<http://bit.ly/UndSciQuestions>)

A simple yet profound thought exercise on evidence is the classic question of “When you plant an acorn, where does the oak tree – the material of the tree itself as it grows – come from?” Here’s an entertaining version of discussion on the topic: <http://bit.ly/OakTree>

And, finally, for a humorous take on the question of the role of evidence in science, check out the Oct, 2011 Daily Show: Science: What’s it up to? <http://bit.ly/DailyShowScience>

--From the ED

Toast to 15 Years!

Thank you to everyone who turned out for our 15th Anniversary Celebration and Auction earlier this month! Teachers, scientists, donors, and friends joined the CRS staff and Board members at Pyramid Brewery to raise a glass in toast to working together to improve science learning opportunities for elementary students. Some of those students in the first classes served in CRS’ very first year may be on the verge of completing their PhDs!

We recognized the important contributions of some of the people who have been critical to the growth and success of CRS: Our distinguished educator partners Susie Ballone and Sherry Johnson; our distinguished community partner, Judy Scotchmoor, and our distinguished scientist partner, Miriam Bowring (*pictured to right*). UC Assistant Chemistry Professor Michelle Chang delighted guests with a charming and insightful talk about science inquiry, education, and the importance of inspiring students.

We were honored to receive this feedback from a teacher: “CRS is the greatest, best-coordinated, one-stop science education

resource I’ve ever come across in 20 years in public schools. The volunteers are fabulous, and the variety of services CRS provides is amazing. Thank you, CRS, and keep up your vital work in providing rich, hands-on, relevant science experiences for children.”

Here’s to the next 15 years!



From Left to Right: Sherry Johnson, Miriam Bowring, Judy Scotchmoor, Susie Ballone

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(Reflecting 2012 Calendar Year)

Go to page
5 to find out
who I am!





BASIS Fall Kickoff

This year's BASIS Fall Kickoff took place in Tan Hall at UC Berkeley, where the view was of the Campanile was impeccable (*above right*) and the volunteers (and pizza!) came aplenty (*above left*). Nearly 100 current and future BASIS volunteers attended the lively event to mingle, learn more about BASIS, and sign up for one-time tabling activities and classroom visit shadowing. To join or learn more about BASIS, visit: www.crscience.org/volunteers/aboutbasis.

Join CRS staff and BASIS volunteers at the **Bay Area Science Festival** Farmer's Market events throughout the East Bay and the AT&T Park Festival Finale. We will be at markets from October 27 - November 1, and you can find us on the Promenade level at AT&T Park on November 3 from 11am - 4pm.

More information: www.bayareascience.org

See you at the Festival!

Please help keep science thriving in local schools!



Consider these examples of *what your donation could do this year*

- \$75** : One science visit to a class of 25-30 students
- \$100**: Customized support for 10 teachers, impacting science learning for 250-300 students
- \$250**: Training sessions for 10-15 volunteers
- \$500**: Field Trip for Teachers Event
- \$1,000**: Workshop stipends for educators
- \$1,500**: "Day of Science" event for the entire 6th grade at one school

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: _____

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

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BASIS Role Model Practice

At some point every scientist has experienced some difficulties explaining their research to non-scientists or even colleagues who are in a slightly different field. So, imagine what it's like for the over 400 volunteers in the Bay Area Scientists In Schools (BASIS) program who make presentations to a classroom full of up to thirty elementary school students.

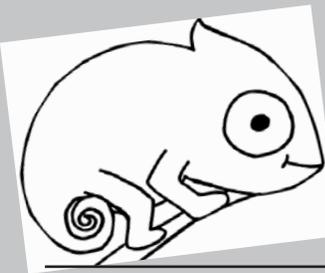
That's why our orientation sessions always include a practice exercise for scientists to think about how they would tell children about what they do all day and create a one-minute elevator pitch for their classroom presentation.

In their 'pitches' volunteers may tell students that they've been in school for 20 years and are in the 19th grade to demonstrate how much training you need to do research in a university setting. Some volunteers share stories about how they either loved or hated science as a child but discovered they really wanted to pursue a career in a STEM field later on.

One mechanical engineer who said that she decided to become an engineer during her school's "Egg Day". She was so excited that she had effectively designed a contraption that protected her egg during a fall from the top of the school play structure that she made up a song about it.

During the exercise, every volunteer tries to find a way to relate to students by connecting their work to something that kids may have experienced in their daily lives like a graduate student in the astronomy department who discovered his passion for astronomy by looking up at the night sky.

This is just one of the ways that CRS staff works with scientists to facilitate a fulfilling role model experience for both the students and volunteers.



Cam The Curious Chameleon

Meet Cam! Cam is a chameleon who is extremely curious about the world and wants to see all the exploration, experiments, and science discoveries in the lab, at work, in the classroom, or in the field!

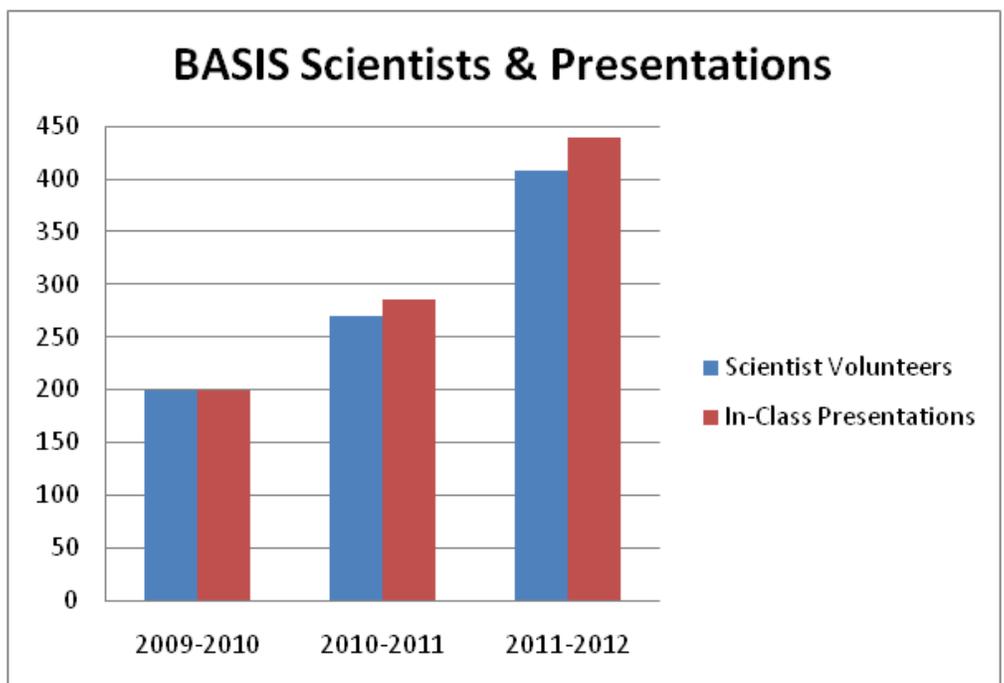
Cam travels with students, BASIS volunteers, teachers, and the CRS staff to take part in science journaling, school science fairs, classroom experiments, dissertation research, field trips, and so much more!

This program is in its pilot stage. Several BASIS teams (and even CRS staff!) will take part this year. Scientists will create photo or video "virtual visits" to their labs, showing Cam exploring the labs and learning about the science that volunteers are working on. In turn, Cam will come to the classroom during BASIS visits -- serving as a catalyst for more in-class science exploration, writing and discussion to share with the scientists.

Cam is an outcome of the CRS Advisory Council work on a virtual pen pal to deepen the teacher/student-scientist relationship after a BASIS visit to a classroom.

More details and photos and video are here:
www.crs-science.org/CamAdventures

Right: Graph outlining BASIS volunteer program growth over last three school years





Community Resources for Science

1611 San Pablo Ave. Suite 10 B
Berkeley, CA 94702
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Left: A kindergarten student in an Oakland school shows off her 'Hidden Colors' color wheel.

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