



# Community Resources for Science

*practical support for great science teaching*

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## New Lesson Demonstration Workshop a Success

Teachers at Lakeview School in Oakland gave rave reviews to the new workshop series CRS piloted at their school this year. The series of three workshops uses lesson demonstrations to explore how the content builds across grades in each strand of the California Science Standards.

Each workshop started with a review of the articulation points in one of the content strands, and then moved into stations where teachers got a chance to see and work with lesson materials. Grade-levels that have closely related teaching areas were grouped together to explore the differences and progression from one grade to the other. For example, second and fourth grade teachers worked together to look at their respective focuses within the area of sand, soils, rocks and earth processes. Third and fifth grade teachers worked together to explore physical models for teaching about phases of the moon, the apparent position of the sun, and the gravitational forces that hold our solar system together. Examples of student work and related children's literature were shared and each teacher was given a folder with all the demonstrated lesson plans.



*Lakeview teachers exploring new activities*

The lessons were selected and led by the expanded CRS teaching staff, including leader teachers Susan Bellone and Sherry Johnson, who have led many workshops in the Castro Valley Unified School District. In addition to adding a new workshop to the offerings available to CRS Members, drawing on existing leader teachers within Alameda County gives these educators a chance to share their techniques and resources with more teachers, making the most of their rich experiences.

All of the participating Lakeview teachers reported that the workshop was "very helpful" in helping them get standard-specific teaching ideas, develop their understanding of science concepts, and find new teaching resources. Each teacher mentioned specific activities that they planned to teach in their classrooms.

This workshop series will be available to other schools in the 07/08 school year along with our established skill workshops on lesson planning, inquiry techniques, and understanding student learning. For more information or to find out about signing up for a workshop series please email CRS at [teach@crscience.org](mailto:teach@crscience.org) or call 510-527-5212.

## CRS Survey Results are In!

CRS members recently responded to a survey designed to help us refine our membership and workshop services, and plan new, web-based support. We got a huge response, and we're very grateful to everyone who took the time to give us feedback. A few highlights:

- Half of respondents have been CRS members for more than one year.
- The three most popular membership services are: help finding classroom activities/websites; mailings about workshops, exhibits and grants; and CIC classroom role model volunteers.
- Members' favorite Social feature is getting examples of lessons/activities related to the event's theme.
- 75% of respondents look for professional development/workshop offerings in CRS mailings; almost as many enjoy email reminders about grade-appropriate science opportunities.
- According to members, the most important features of professional development workshops are: convenient location and time; targeted content; free curriculum materials or lessons; and stipends.
- More than 75% of CRS members use email daily and most prefer to hear from CRS via email. However, while 75% use the Internet for lesson planning, fewer than half have used CRS's website.
- Teachers are interested in using web-based resources from CRS, including: links to science education resources/websites, CRS info reports on field trips, programs, etc., video examples of science activities, and CRS planning tools and tutorials.

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## CIC “Teams” Involve More Scientists in Outreach

Our popular Community in the Classroom science role model volunteer program started a new experiment this year called the “Teams” project. Seven Chemistry professors allowed CRS to invite interested members of their research groups to participate in the project, forming seven teams to develop group presentations. These teams of four to eight people from each lab had fun working together to develop classroom presentations, and then visited classrooms two or three at a time, about once a month throughout the school year. In this way, the outreach effort is shared among many – and can also reach more students in local elementary schools. We’re looking forward to continuing to work with teams from the Alivisatos, Arnold, Bergman, Bertozzi, Cohen,



Oakland students explore polymers with the Alivisatos lab group.

Groves, Raymond, and Tilley labs, and to invite more groups – from Chemistry and other departments – to join the program next year.

You don’t have to be in a research group to participate in CIC! We continue to work

with all interested scientists (and science enthusiasts) who want to do classroom outreach. In addition, we will be working to build our curriculum-intensive Scientist Teacher Partnership Project that engages a pair of scientists to work with a grade-level teaching team to co-plan and co-teach a science unit.

We want to wish a fond and grateful farewell to our outgoing UC Campus Liaisons Ravi Chandra and Jacob Hooker, who have been helping us develop the Chemistry collaboration for the past three years. As Ravi and Jacob complete their PhDs and move to new horizons, we are delighted that Stavroula Hatzios will be working with us to continue our close connection with the Chemistry Department and reach out to new participants.

## Be CuRious: About Science Professional Development



Have you ever thought about doing professional development work at sea? That’s just one of many exciting opportunities for science professional development for teachers.

**NOAA Teacher at Sea:** The National Oceanic and Atmospheric Administration’s Teacher at Sea program provides a unique environment for K-16 teachers to work on research and survey ships at sea. The experience is life-changing for teachers. Further, it exposes students to first-hand accounts of marine careers, and promotes a greater awareness of the need to understand and protect the world’s oceans and their resources. All costs paid for or reimbursed by NOAA. <http://teacheratsea.noaa.gov/>.

**IISME:** Industry Initiatives for Science and Math Education (IISME) places

Bay Area K-16 teachers into paid, high-performance work sites for the summer. Previous placements include education content specialist at Adobe, microbial ecology curriculum developer at NASA, and pterosaur replica designer at Stanford University. Stipend of up to \$7,400 provided. <http://www.iisme.org/>.

**Project ASTRO:** Teachers in grades 3-9 are paired with volunteer astronomers, who visit the classroom at least four times during the school year and provide ongoing support. Teacher/astronomer teams develop a strategy for using astronomy and space science activities to engage and motivate students, focusing on inquiry-based, hands-on, age-appropriate activities. No experience necessary in teaching astronomy. <http://www.astrosociety.org/baprojectastro.html>

**CRS:** Check the CRS website for current listings of upcoming professional development opportunities from a host of different organizations! <http://www.crscience.org/teacher/bulletin.html> This list is updated three times a year and included with Members’ informational mailings.

Don’t forget that our own CRS staff provides professional development workshops to schools as well. Check out our offerings at <http://www.crscience.org/teacher/workshops.html> or by calling

### COMING SOON!

#### More Features on the CRS Website

[www.crscience.org](http://www.crscience.org)

CRS is in the process of making our resource database available online to members! Soon, instead of having to call or email CRS for information about field trips, in-class programs, materials, and websites, teachers will be able to do their own searches from our website. We hope to roll out this exciting new membership feature next fall. In the meantime, please click on the “for teachers” tab on our website at [www.crscience.org](http://www.crscience.org) to see some of the features we’ve been developing in response to teachers’ interests!

## Environmental Education Evaluation Learning Community

For several years CRS has been participating in a project made up of more than 25 environmental education leaders, grantmakers, and evaluation professionals that is focused on articulating shared outcomes and building collective capacity for measuring progress towards those outcomes.

For the first two years of the project, the Learning Community worked together to develop a Regional Framework logic model for environmental education. Upon completion of this phase, CRS worked with three other organizations to develop a plan for funding a continuation of the project. Last year, the group piloted a "Peer Cluster" evaluation project, in which each of four organizations hosted a site visit for colleagues to review, critique, and build evaluation tools around some aspect of the host site's



Learning Community Meeting in 2006

program. This year, the group is organizing a series of four professional development meetings for building organizational capacity for participants' evaluation practices and moving towards collaborative evaluation/research projects.

We are very excited about working collaboratively with other organizations who share common interests and goals, not only to find ways to share and learn from each others' programs, but also to build our skills together towards understanding shared outcomes.

For more information about the Learning Community, you can find a list of evaluation resources and a directory of EE evaluation professionals at [www.creec.org/region4/stories/storyReader\\$49](http://www.creec.org/region4/stories/storyReader$49).

## Thanks to our Donors: June 2006 - May 2007

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Sally West and Peter Compton

**Contributions to CRS have been made in honor of the following teachers:**

Jessica Cole  
Richard Fairly  
Nancy Monteleone  
Bob Sauer

## Become a CRS Member

Not a member yet? Sign up online at [www.crs-science.org/membership/](http://www.crs-science.org/membership/)

CRS provides year round science planning support to elementary teachers. We'll be available over the summer to help members find programs, websites, activities, and materials for your science units.

Are you changing grades in the fall? Want to find a few new activities to spice up an existing unit? Please contact us to request information and planning support! Email us at [teach@crs-science.org](mailto:teach@crs-science.org) or call any time: 510-527-5212.



Check us out online:

[www.crscience.org](http://www.crscience.org)



## CRS is Ten Years Old!

It's hard to believe that CRS has been working for and with teachers and program providers

for ten years! To mark this important anniversary, we will be launching some important new projects in school year 07-08. Stay tuned for more information about improvements:

- On-line access for members to our resource database
- Our new Strategic Plan
- Special Events
- New website features and services

*Over the past 10 years CRS has:*

...worked with nearly 2,000 public elementary school teachers

...led workshop series at more than 20 schools

...trained and placed more than 200 science role model volunteers, to inspire thousands of young students about science education and career paths

...helped districts, agencies, science and environmental education organizations collect and analyze information to help them become better partners with schools and teachers.

***The mission of CRS*** is to build a community of educators dedicated to getting kids excited about learning through science. This community includes **YOU!** Whether you're a teacher, a scientist, a parent, or an informal educator, let us help you connect with elementary students, schools, or science programs to support great science teaching.

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