



CRMSE Colloquium Announcement

Joan S. Bissell, Ed.D.

Director of Teacher Education, CSU Chancellor's Office

Dana Gharda

Sr. Manager of University Relations, Life Technologies

**Expanding Learning Opportunities and Places:
After-School STEM Experiences for Students,
Summer Lab Research Experiences for Beginning
Science and Math Teachers**

Friday, March 26, 2010

1:00 – 2:00 pm

6475 Alvarado Road, Suite 128

RSVP: Karen Foehl, kfoehl@sciences.sdsu.edu

Abstract: There is now substantial evidence indicating that *children's learning* of science and mathematics can be significantly enhanced through out-of-school time learning experiences. (National Academy of Sciences, *Learning Science in Informal Environments*, 2009). After-school programs have shown positive effects on children's interest in science and mathematics, their understanding of scientific and mathematical concepts, and their opportunities to engage in mathematical problems and in scientific exploration and discovery. California presents a unique context for collaborating with these programs: 4,000 of its 6,000 K-8 schools and 80% of its highest need schools have after-school programs funded at a level of \$550 million annually.

There is also now important research related to broadening opportunities, places, and times for science and mathematics *teacher learning*. This research demonstrates that teachers' participation in summer laboratory research experiences enhances their classroom teaching, their retention in the profession, and their students' learning (*Science*, Silverstein, 2009).

The presentation will explore opportunities for expanding learning experiences *for both teachers and students* and improving K-12 science and math teaching and learning outcomes.