

The COPUS Clarion

A monthly newsletter of the COPUS network Volume 3 Issue 6 June 2009

The Coalition on the Public Understanding of Science (COPUS) is a grassroots effort linking universities, scientific societies, science centers and museums, advocacy groups, media, educators, government agencies, businesses, and industry in a peer network having as its goal a greater public understanding of the nature of science and its value to society.

SCIENCE AFTER SCHOOL: A NEW FRONTIER

Jason Freeman, Coalition for Science After School

Gabrielle Lyon, Project Exploration

Curiosity doesn't have a clock: Kids don't stop being curious when the dismissal bell rings at the end of the school day. Offering young people a chance to explore the world around them and figure out how it works is a good thing to do anytime—particularly in after school settings. More than 6 million youth are in after school programs, and 15 million more would be in those programs if they were available in their community. Parents, educators, researchers and policy makers understand that school isn't enough to help students reach their full potential. Schools and neighborhood community organizations (such as YMCAs and Boys and Girls Clubs) are asking: How do we help these students get to do science? Model programs, research-based curricula, and a growing network of organizations and professionals are all working on the answer!

Engagement is critical: Research shows that when it comes to predicting future career decisions, early interest in science is more important than test scores. The U.S. Department of Labor is projecting that jobs requiring training in Science, Technology, Engineering and Math (STEM) will increase by 51 percent between 1998 and 2008 – four times faster than overall job growth. However, growing emphasis on standardized testing has resulted in less school time devoted to science.

Equity through science learning: Children need time to explore their own ideas about science and technology. Many children view science and technology topics as something that only happens in a classroom and may not understand that science describes the world around them. Gender and ethnic differences in the science workplace persist, not because of academic performance, but because fewer girls and children of color are exposed to science as an engaging career option. Furthermore, while middle and upper middle class young people often have regular access to after school and summer enrichment opportunities, students from less well off situations do not. This disparity further exacerbates the diversity of students who are exposed to high-caliber science experiences.



After School Needs Science, Science Needs After School: The Coalition for Science After School (CSAS) recently released two reports on the state of STEM learning in after school programs. A market study, funded by the S.D. Bechtel, Jr. Foundation, found that 88% of after school programs surveyed are offering science; 80% consider science a priority; but, very few are offering consistent programming, using curricula designed and tested for after school, or supporting the programming with staff development and evaluation. CSAS also published a report, funded by The Noyce Foundation, on the staff development needed by after school providers. There is evidence that youth workers—often part-time and paraprofessional—are effective leaders of inquiry learning because they are comfortable letting the children explore their own ideas and interests. Thus, science learning is already happening in after school programs, and scientists are needed to nurture these programs toward excellence. www.ScienceAfterSchool.org.

Project Exploration: Project Exploration is nonprofit science education organization dedicated to making science accessible to the public – especially minority youth and girls – through personalized experiences with science and scientists. One successful Project Exploration program, Junior Paleontologists, launches with an intensive three-week summer program that takes minority youth and girls in middle and high school through a comprehensive experience in paleontology fieldwork with scientists. Once the students return, participants receive year-round mentoring and science leadership opportunities through to graduation. www.projectexploration.org

- **After-school Science PLUS:** Across New York City and the country, After-school Science PLUS participants do science activities that suit their learning styles, using materials that they are familiar with, led by people from their communities.

- **Techbridge:** Working through community organizations and school districts, Techbridge extends the reach of the Chabot Space and Science Center across the Bay Area and the country. In after school and summer programs, Techbridge offers girls hands-on experiences with technology, science, and engineering projects, and connects them to career opportunities through classroom visits and field trips.



SPECIES NAMING CONTEST FOR THE BONAIRE BANDED BOX JELLYFISH

Join a scientific team and help give the Bonaire Banded Box Jellyfish (BBBJ) a species name! This new name will become the official scientific name and appear in several scientific publications.



Image Credit: Marijke Wilhelmus.

In 2006, a young girl was stung while swimming at a Caribbean beach and wound up in the hospital. What stung her?

We need YOUR HELP to answer this basic question. The culprit is known commonly as the Bonaire Banded Box Jellyfish. Few people have seen it, and even fewer have studied it. In fact, it does not even have a scientific name. Until now. . . .

During the first 10 days of June, you can submit a potential species name. A scientific team will then pick their top 5 favorites, which will then be up for vote by the public in mid-June.

Visit the Year of Science 2009 web site at www.yearofscience2009.org/themes_ocean_water/general/jellyfish.html:

- ✧ Learn about the Bonaire Banded Box Jellyfish (BBBJ).
- ✧ Meet the scientific team that you could become a part of.
- ✧ Learn about the team's adventures with BBBJ
- ✧ Learn the Do's and Don'ts of species naming
- ✧ Submit a species name.
- ✧ Vote on the top 5 names submitted: Check back June 19th to the 21st to see if your name made the scientists' top 5 favorites, then vote for your favorite.
- ✧ See the winning name. After June 23rd, we will post the winning name and the name of the paper in which it will be published.

THE YEAR OF SCIENCE ZINE-A-THON CONTEST IS HERE!

What is a Science "Zine" (pronounced zeen)? Imagine a mini-magaZine you make yourself. Now make it smaller—nope, smaller still! From a single 8 1/2 x 11" sheet of paper you can make an 8-page booklet that fits in the palm of your hand.

Participate in the first ever Zine-a-thon and win prizes! Find complete details—along with templates, instructions and a submission form—on the YoS Web site at www.yearofscience2009.org/about/zine-contest.html

1. Choose a topic and theme. (You can zine about anything in science -- from pigeons to earthquakes to neutrinos -- but we are going to ask you to align it with one of our YoS themes.) 2. Design it! 3. Fold it! 4. Submit it!

All submissions must be postmarked by November 1, 2009.

For even more tips on creating a great zine and for examples, visit the Small Science Collective Web site: <http://smallsciencezines.blogspot.com/>

✧ **PRIZES** -- 36 different winners will receive prizes donated by YoS partners and one top zine contributor will receive a \$500 grand prize, provided by Shodor! Two prize winners will receive a \$250 prize each, provided UnderstandingScience.org. Selected zines will also be highlighted and shared through the YoS Web site & the Small Science Collective.



Questions? Comments? Ideas? Contact admin@copusproject.org.

Support for COPUS planning workshops was provided by the National Science Foundation under grant numbers EAR-0606600, EAR-0628790, and EAR-0814048 to the University of California Museum of Paleontology. The cognizant fiduciary body for COPUS and the Year of Science 2009 project is the American Institute of Biological Sciences Inc., a 501(c)(3) nonprofit organization, which is providing staffing support, IT, and other resources. The Geological Society of America, the University of California Museum of Paleontology, and the National Science Teachers Association are also contributing funds for COPUS and the Year of Science 2009. The Steering Committee welcomes support from additional scientific organizations and is also pursuing funding from federal agencies and private foundations.