coalition on the public understanding of science

292 days until
Year of Science 2009...
and counting!

The COPUS Clarion

A monthly newsletter of the COPUS network Volume 2 Issue 3 March 2008

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.

Who Says Science Can't be Fun-ny?

Contributed by Ronnie Feldman, Producer, Galileo Players – Scientists of Comedy

The world is a funny, funny place. How else can you explain helium's ability to improve your singing voice, the Vatican's planetarium, and the innate joys of bubble wrap? But oddly, science, our best tool to explain the world around us, is often considered boring, complicated, and intimidating. Well, we don't think it has to be! We are the Galileo Players, a professional sketch comedy and improv troupe that focuses on making audiences laugh, using scientific characters and events as inspiration. We tour our theatrical comedy shows around the country performing at colleges, festivals, scientific conferences, and corporate events. Our focus is entertainment, but we try to engage people with ideas and let the science creep in when they're not looking.

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Galileo Player Founders, Ronnie, Tom and Matt work on comedy in the lab.

We use the history of science for much of our material, as it is filled with drama and irony, great successes and failures, memorable moments, and colorful characters. We write about famous (and sometimes infamous) scientists and statesmen that were extraordinary yet tragically flawed. We improvise about contemporary events and discoveries that have had an effect on our understanding of the world. We poke fun at these characters and moments in history to enlighten the audience about our worlds' rich and varied existence, while sharing a laugh at the same time. And as long as television makes stars out of psychics, and presidential candidates brag about not believing in evolution, there's no shortage of material for relevant social satire that can be used to help bridge the gap between science and society.

We are fortunate to have been a part of lots of creative programming through our travels. The Chicago Field Museum engaged us to write and perform a live theatrical show about dinosaur extinction theories to help promote their Evolving Planet exhibit. The Cleveland Technical Societies had us perform a comedy show on Mole Day* to help generate interest amongst the scientific community. Case Western University's show was to celebrate Geek Week, Virginia Tech wanted something for their graduate student community, and Buena Vista University wanted to draw attention to their new science building on campus. And we've performed for many scientific conferences for researchers, chemists, genetic engineers, and more, all of whom were looking for something bold and different to celebrate and entertain their members. Turns out PhD's like to laugh too (although they're self-conscious about it).

Fruit Flies rant about life in the jar

These are just a few examples of some programming we've been a part of, but the COPUS project and the Year of Science is a great excuse to reach out to the community to discuss and explore how each of our organizations is connected to the world. But let's not take ourselves too seriously, because it's a spoon full of sugar that helps the medicine go down, not a spoon full of $C_{12}H_{22}O_{11}$. www.galileoplayers.com.

**(Yup, you guessed it, Mole Day is celebrated every year on October 23 for Avogadro's number 6.02 x 10 23. Oh and don't forget Pi day on March 14th, people!).*

Welcome New Participants!

- 4Frontiers Corporation
- Baltimore Ecosystem Study, Long-Term Ecological Research
-Camp Bayou Outdoor Learning Center
- Cephalopodcast - The Ocean Podcast
- Coolidge Corner Theatre Foundation
- Elementary Science Coalition
- The Florida Aquarium
- Illinois Science Council
- Inspiration Software
- Keane Biological Consulting
- KQED Public Broadcasting
- National Middle Level Science Teachers Association
- New Hampshire American Association of University Women
- New Mexico State University: Department of Entomology, Plant Pathology and Weed Science
- New York Hall of Science
- Self Reliance Foundation
- Society of Environmental Toxicology and Chemistry of North America

International Colleagues

- Davidson Institute of Science Education at the Weizmann Institute of Science
- Nehru Planetarium

Featured Programs

Science and Art: partners or polarities?

Contributed by Elizabeth Johnson, Liz Lerman Dance Exchange

The past five years prove to the Liz Lerman Dance Exchange that scientists and artists together are excellent partners -- by working together, both benefit by broadening participation and engagement in their craft. Since its inception in 1976 Liz Lerman Dance Exchange has been deeply committed to concert performance, community engagement, and innovative partnerships.

"Ferocious Beauty: Genome," an evening-length performance choreographed by Liz Lerman leads audiences to say "Wow!" as scientists share their knowledge, creativity and passion for discovery via video while dancers translate research on genetic mutations on stage as the "scientist becomes choreographer." Through humor and story (and characters like Ms. TATA, a dominatrix transcription promoter who "turns the gene on"), act one humanizes science and scientists, and helps audiences connect to the wonder of the world inside of them. The second act makes audiences say "Whoa!" as the implications of genetic research unfold in the light of aging and imperfection, and the conclusion celebrates individual genetic diversity and ancestral commonalities. "Ferocious Beauty: Genome" engages audience to want to know more about the genetic thread of life.

In addition to the performance work, Dance Exchange collaborates with scientists, educators, artists and community partners to develop a diverse array of related public programming customized to the particular needs of each community. Exemplar programs include science curriculum development using kinesthetic learning structures; artist facilitated, participatory, public forums addressing the legal and ethical implications of genetic research; and teen focused science/ art projects including "Slam Science" where hip hop meets genetics.

As an artist who had never previously connected with science, these experiences have changed my perspective. I now know that science is a creative act. Science is not just about facts; it is about inquiry and the investigation of ideas. I have seen how, when we embody something, we realize the gaps in our knowledge, and that we can be fueled by our ignorance towards understanding. Art helps us feel — as well as think about science; it is a rigorous process, and the best way to understand something, is to make something. I now know that science is beautiful, and our bodies are amazing. For further information visit www.danceexchange.org.

Gastropods Teach Science, the Fun Way!

Contributed by Monica Woelfel, Banana Slug String Band

What does a grown man singing and dancing around in a "water droplet" costume have to do with science? Everything, it turns out. Especially if you're one of the thousands of schoolchildren, teachers, and parents who get funky each year to the tunes of the award-winning Banana Slug String Band. As *Parenting Magazine* put it, "With zany, eminently singable songs, the Banana Slugs succeed where many conventional instructors have failed." Based in Santa Cruz, California, the band's four members came together more than 20 yeas ago as naturalists at outdoor education camps. They shared a love of music and a passion for teaching young people to be good stewards of the earth. One of them (Steve Van Zandt) also had a knack for writing catchy tunes and whimsical lyrics.

"Using music to teach science grabs the kids' attention ... they don't even know they are learning; they are having so much fun!"

One thing that sets the Banana Slugs apart from other children's bands is a dedication to scientific accuracy in its lyrics. Over the years, this has led them into collaborations with science educators who recognize the band's music as an effective tool. In 1991, for example, the Slugs partnered with MARE (Lawrence Hall of Science's Marine Activities, Resources and Education program) for MARE's K-8 curriculum. A 1999 project used input from biologists and rangers to produce the Band's sixth CD, "Goin' Wild," a musical exploration of the ecology of Grand Teton and Yellowstone National parks.

"Using music to teach science grabs the kids' attention," explains band member Larry Graff. "They don't even know they are learning; they are having so much fun!" The Banana Slugs' performances nationwide have included appearances at Shedd Aquarium in Chicago and at the American Museum of Natural History in New York City. In May 2008, the Slugs will step on stage at Bioblitz, a National Geographic celebration of biodiversity.

This year marks the Slugs' release of their 10th recording, "We All Live Downstream," initiated by an Ohio Environmental Protection Agency grant that launched the Slugs on a series of watershed concerts, workshops, and interactive family performances. Now the Band is dancing with excitement—water-droplet costume and all—at the chance to help children across the country learn watershed ecology. More information can be found on the Slugs Web site at www.bananaslugstringband.com.

Questions? Comments? Ideas? Contact Sheri Potter at spotter@copusproject.org.

Support for COPUS planning workshops was provided by the National Science Foundation under Grant Nos. EAR-0606600 and EAR-0628790 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 Year of Science 2009. The Steering Committee welcomes support from additional scientific organizations and is also pursuing funding from federal agencies and private foundations.

American Institute of Biological Sciences | THE GEOLOGICAL SOCIETY OF AMERICA | NSTA National Science Teachers Association | University of California Museum of Paleontology