

Year of Science 2009

A Community Project to Promote the Public Understanding of Science

As scientists and educators are well aware, science is more than a collection of data and facts. Science is a way of learning about the natural world and how it works. *Doing* science involves procedures for generating ideas and testing their predications against observations; it is an intellectual and social endeavor carried out by individuals as part of a community whose members evaluate each other's work against a body of accumulated scientific knowledge that has proven useful in answering questions and solving problems.

A general public with an understanding of the nature of science produces a skilled workforce able to compete in a knowledge-based global economy; individuals capable of making more informed decisions about relative risks, such as medical treatments and other quality of life factors; and an electorate more prepared to engage in public policy discussions involving science. An insufficient understanding of science leads to exclusion from much of the discourse of modern society, an inability to distinguish science from non-science, and a vulnerability to special interests attempting to drive public perceptions of science in their favor.

Many in the scientific community see the need for a coordinated and sustained effort by scientists to engage the public directly and with the help of communications experts, to do a better job of explaining the nature of science, and to be ready to learn about and adapt to public perceptions of science in the process.¹

The Year of Science 2009 is such an effort. It began taking form as a collaborative project among scientific organizations from a broad array of disciplines when leaders at the National Academies² explored ways to improve public understanding of science using the theme of "How do we know what we know about x?" in the material world and how it affects us. This approach can serve as a powerful organizing basis for the participation of many professional societies and other organizations in a collaborative effort. In May 2006, following a presentation by a staff member from the NAS to the Council of Member Societies and Organizations of the American Institute of Biological Sciences (AIBS)--which consists of almost 200 independent scientific societies and organizations--the AIBS Council unanimously passed a resolution encouraging AIBS to work with other members of the scientific community to enhance the public understanding of science and to make the year 2009 a focal point for those efforts.³ The AIBS Board of Directors unanimously accepted the resolution from its Council.

Through scientific meetings and public lectures, news articles and editorial briefings, classrooms and laboratories--not to mention websites and programs at museums and science centers--participants in Year of Science 2009 will demonstrate that science plays a vital role in the future of humanity and inspires the best qualities of the human spirit.⁴

¹ Gropp, R.E. 2006. Teaching the Public about Science. *BioScience*. 56(2): 91

² The National Academies include three honorific organizations, the National Academy of Sciences (NAS), National Academy of Engineering, and the Institute of Medicine. The National Research Council serves as the operating and research arm of the National Academies.

³ 2009 will be the 200th anniversary of the births of Abraham Lincoln, founder of NAS, and of Charles Darwin. It is also the 150th anniversary of the publication of *On the Origin of Species*.

⁴ Holsinger, K. E. (AIBS President, 2006). A New Era for the Public Understanding of Science. *BioScience*. 56(12): 955

AIBS and NAS representatives have been sharing the concept of Year of Science 2009 with representatives from other national scientific organizations—including, to date, the Federation of American Societies for Experimental Biology, the Biotechnology Institute, and the Geological Society of America—all of whom have indicated their interest in participating in 2009 events. Other scientific organizations are invited to participate.

Furthermore, the newly formed Coalition on the Public Understanding of Science (COPUS: www.copusproject.org) has made the Year of Science 2009 one of its focal activities and will provide network links and logistics support among the participants for the sharing of information and resources. Participants will become part of an informal network and have the opportunity to expand their collaborations before and after 2009 via the COPUS organization.

Year of Science 2009 activities will include:

- 1. *Creation of a project website*** by AIBS and COPUS to coordinate the listing of the 2009 activities for use by participating scientific organizations as well as members of the public, including a searchable database of events, an interactive map of events, a blog, a press room, public service announcements, and links to content in the Understanding Science website (www.understandingscience.org) being developed at the University of California, Berkeley.⁵
- 2. *Participating organizations sharing information and raising funds*** as they develop their programs for 2009, such as making the public understanding of science the theme of their 2009 annual meeting, free public lectures, roundtable discussions, editorials, new online resources, and starting a Café Scientifique (www.cafescientifique.org).
- 3. *Opportunities to mark 2009 as the 200th anniversary*** of the birth of Abraham Lincoln, founder of the National Academy of Sciences, as well as the 200th anniversary of the birth of Charles Darwin and the 150th anniversary of the publication of *On the Origin of Species*. Lincoln and Darwin are linked not only by their birthday on 12 February 1809 but by their deeds. More than any other act in U.S. history, Lincoln's founding of the NAS brings to mind the vital role that science plays in public policy. And more than any other part of modern science, Darwin's insight into the nature of evolution reminds us of the challenge posed by those who would substitute nonscientific for scientific views.
- 4. *Collaborations with communications experts*** on framing scientific explanations most effectively for public understanding.
- 5. *Summary reports***, other deliverables, and follow-up plans after the end of 2009.

Participating organizations will have access to the brands, logos, media coverage, other publicity materials and databases that are developed for this project. They will receive regular updates on what member organizations will be doing for this year-long celebration and will receive assistance in planning events to conform to the overall themes that will be used throughout 2009. Organizations that agree to participate by June 2007 also will be able to suggest which specific crosscutting themes will be developed for 2009.

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⁵ NSF Award 0624436. Roy Caldwell and David Lindberg, University of California, Berkeley. For the construction of a website portraying what science is and how it works, with tools for teaching those ideas.