



## TWENTY FIVE YEARS FOR PRCST

### Always ahead of the Curve

Join us on October 15, 2009 as the Pittsburgh Regional Center for Science Teachers honors the 25th Anniversary of the PRCST record of professional development programs and resources provided for K-12 educators. The all-day conference will be held in the Lecture Hall, Carnegie Museum of Natural History. The keynote speaker will be Dr. Devra Davis.

Dr. Davis was designated a National Book Award Finalist for her book *When Smoke Ran Like Water*. Her book *The Secret History of the War on Cancer* was a Newsweek must read pick for the week. Both her books have been translated into Italian and Chinese and been the subjects of documentary television and public radio and television coverage. Davis is a Professor at the University Of Pittsburgh Graduate School Of Public Health's Department of Epidemiology. Dr. Davis has recently established the Environmental Health Trust, a nonprofit foundation dedicated to identifying and controlling environmental causes of illness ([www.environmentalhealthtrust.org](http://www.environmentalhealthtrust.org)). Dr. Davis founded and directed the world's first Center on Environmental Oncology at the University of Pittsburgh Cancer Institute. The multidisciplinary center develops cutting-edge studies to identify the causes of cancer and propose policies to reduce the risks of the disease. Previously she was the founding director of the National Academy of Sciences Board on Environmental Studies and Toxicology (1983-1993) and a Clinton Administration Presidential Appointee to the National Chemical Safety and Hazard Investigation Board from 1993-99.

*(Current Environmental Crises are addressed by the PRCST Program "Environment and Health: A Systems Approach" – now spreading across Pennsylvania, thanks to the PA DOE-Office for Environment/Ecology and the Education Grants from DEP. This professional development program for K-12 area teachers has also been supported by the Center for Environmental Oncology (CEO) financially, and with an outstanding speaker, Dr. Maryann Donovan, and print resources.)*

*(See Directions Section)*

## PRCST MILESTONES

### Background and organization:

1983 – A regional conference reflecting the national “Crisis in Science Education” was held at Winchester-Thurston School – organized by Martha Cussler, Curriculum Coordinator  
Leaders: Richard Brinckerhoff and Arthur Compton – Exeter Academy – funded by the Klingenstein Foundation to travel nationally and develop regional centers.

An Ad hoc Committee formed: some members included Indira Nair, CMU and Jane Konrad, Sewickley Academy.

Regional exploration was carried out to determine whether a critical mass of need existed. Foundation assessment and support was sought resulting in the decision to form a regional center:

1984 – Incorporation - Pittsburgh Regional Center for Science Teachers as a 501(c)3 non-profit  
Founders: Ron Baillie, Jane Konrad, Richard Elder, Atty.

Board of Directors:

President, Dick Jackson, PDM Inc.

Treasurer, Edgar Holtz, Director, Allegheny Intermediate Unit

Dick Wallace, Superintendent, PPS

E. Kears Pollock, PPG Industries, Inc.

Jim Wilcock, Retired, CEO Joy Mfg.

PRCST was housed by the Carnegie Museum of Natural History – seen as an educational neutral site. In-kind support provided office space and access to scientists/research departments.

### Initial Goal:

Development of a database of resources for science teachers – LASER (Local Access to Science Education Resources) - using the resource data compiled by Jane Konrad. The Initial computer system was provided by the Spectroscopy Society of Pittsburgh (SSP) and the Society for Analytical Chemists of Pittsburgh (SACP). John Enyhart, Department of Chemistry, University of Pittsburgh, served as the Computer Program Advisor.

Additional funding in later years was provided by the Pittsburgh Foundation. Database construction and use continued to development of the World Wide Web.

### Related efforts:

LASER Newsletter was originally published three times/year and mailed to over 1500 area teachers with current science/ education news, available resources and available programs/workshops. Now online – U. Pittsburgh. John Varine, SSP/SACP Advisor.

Teacher surveys – current needs and ideas: originally designed and analyzed by Gene Moser, U. Pittsburgh, to help guide development of PRCST Programs

Professional Development workshops were developed and based on documented needs.

Ex. Using computers in the classroom. Kevin Scanlon, SSP/SACP, first workshop with a focus on computer use for teachers.

Discipline oriented workshops - examples:

First workshop \* Chemistry – Using Electrophoresis – CMU Dept. of Chemistry  
Patricia Bordell, chemistry teacher attended

Environment – Frick Nature Center, Dan Dziubek, Director, PRCST Conference  
Support and outreach to new PA DOE Office for Environment/Ecology, Dean Steinhart,  
First Advisor; Current advisor is Patricia Vathis.

Physics – Workshop Series, led by Robert Reiland, APRT Teacher, Fox Chapel SD

Grade Level Focus: ex. Elementary Science: Using Dr. Seuss books  
After School Specials – Metamorphosis, CMNH Section of Entomology,  
Chen Young, Collections Manager

Science-Technology Society (STS) Programs:

Work with the Follow-up Exeter Conferences to integrate STS into existing curriculum:  
Robert Yager, U. of Iowa, Head, Science Education Department. Development of  
Iowa Chautauqua Program – model program

Affiliate of Triangle Coalition for Science & Technology Education: presenter and attendee at  
Triangle Coalition conferences/ meetings.

Development of the Volunteers in the Classroom Program – Judy Mack, Teacher  
One of five test sites in the U.S. – materials development for U.S.  
Funded through the Triangle Coalition and matching funds from The Pittsburgh Foundation  
Training for directors of affiliates in the Eastern U.S. held at the U. Pittsburgh  
Writing/editing Volunteer Manual  
Board of Directors – member

**Development of extended STS Programs:**

Work with the initial national Technology Learning Conferences (TLC) – forerunner of the National  
STS Program (NASTS – now IASTS). President, 1993  
Regional STS Symposia were held annually – Indira Nair, Chair

**Outreach connections and programs/Jane Konrad, Executive Director:**

Research for Better Schools: Board Member, PA component of the Mid-Atlantic  
Eisenhower Consortium, Keith Kerschner, Director. Help with establishment of PA  
collaborations for Science education.

STS Components:

Science – member of the standards committee for Environment/Ecology  
Member of NSTA Task force on Professional Development  
Member of NSTA Professional Development Committee, Presenter,  
Special PD workshop at National NSTA Conference.

Technology – member of committee to develop Biotechnology Framework – PA DOE  
Konrad - Coordinator Outreach Program, Pittsburgh Supercomputing  
Center – National program designed to integrate high  
performance computing into High Schools.  
PRCST Moved to University of Pittsburgh ITEC Center, computer  
education – 1990  
Database expansion, service to School of Education Professors,  
(David Crossman – class introduction to the Internet)  
PA NASA Educator Resource Center – Training Facilitator, Albert Nous,  
Director ; Konrad currently Director  
NSF/ATE Grant with NorthCentral MathScience Collaborative:  
Bringing Webcast training and equipment into 17 School Districts,  
in collaboration with the Moon Area SD

Society – Integration across disciplines:  
Linking Language Arts – Using Classical Myths in the classroom  
Linking History - Lewis and Clark Expedition – The Pittsburgh Connection  
Development of a L&C Website highlighting Science as the focus of the Expedition,

Charles Greenberg, Chair and main author, Art Institute of Pittsburgh,  
Senator John Heinz Pittsburgh Regional History Center  
Environment and Health: A Systems Approach – now going statewide  
Development of custom basic kit, teacher manual, and four supplementary  
kits with ScienceKit and Boreal Laboratory. Support from the PA DOE/  
Office for E/E, Education Program - PA DEP Education Grants, and the  
Center for Environmental Oncology (CEO).

**Related outreach and work:**

NSTA – presenter and member  
PSTA – presenter and member  
PA NASA Educator Resource Center (ERC): Director after retirement of Dr. Nous.  
Affiliate of PA Space Grant Consortium  
NASA GLOBE workshops – related to interdisciplinary programs  
Development of Curriculum – Goddard Space Flight Center – Dennis Christopher and RBS  
University of Pittsburgh School of Education:  
Department of Instruction and Learning – Summer courses (IPRE), Elementary Methods Course,  
Online Science Education Course  
Online websites: LASER newsletter – with Synergy , Lewis & Clark website.  
NASA resources website.  
PCEE – Founding/advisory member and Higher Education Committee member  
PAEE – Presenter, Board member  
STEM Subcommittee – Western PA

**Community Connections:**

Past:

Carnegie Museum of Natural History – Chair, Friends Committee & GEM Spectacular events  
National Museum Volunteer Association – Charter Member; President  
Phipps Conservatory – Volunteer Division – Chair, Education Committee; Vice-President  
ASSET – Initial development, funding, professional development training  
Regional MathScience Collaborative – member Steering Committee, Resource Provider

Present:

PA Gov. Institute: Environment/Ecology – staff and presenter (10 years)  
Air & Waste Management Assn. – Education Committee  
Carnegie Science Center – Science Excellence Awards: Catalyst Nomination Committee member  
GEM – member  
Regional MathScience Collaborative – Resource Provider  
Sustainable Pittsburgh – Land Use Committee  
STEM Initiative – Southwestern PA Network – member

**TODAY:**

Today PRCST continues staying ahead of the curve through program development that works to help teachers align curriculum with current standards, enable their students to achieve, and bring current, accurate and relevant information to educators. Connections with research scientists and laboratories ensure this effort while current links to developing standards and academic requirements are used as bases for program development.

## GREEN AHEAD OF THE CURVE

Using the instructional strategy Science-Technology-Society (STS) by Green Design brings to PRCST programs the C3 Approach:

Content – the basic science concepts and knowledge needed for constructivist education

This includes skills development and technology; STEM components are addressed:

Science content and skills: GLOBE Protocols

Technology: Research tools: GIS/ GPS, Database use, lab research activities

Engineering: Design components: Green Design – materials, architecture, application

Mathematics: data collection, analysis and synthesis of data, predictive value of data

Context - making meaningful connections across disciplines; applications of knowledge

Forming new mental models

Conation – addressing the whole child in development of striving skills, exploring career options.

## **DIRECTIONS**

### **NSTA CONFERENCES**

- |                     |  |
|---------------------|--|
| October 29-31, 2009 | Minneapolis, MN; Science Teaching in a Greener World,<br>Making Science Connections for Student Learning Across the Curriculum<br>Sharpen and Shape Science Instruction and Assessment   |
| Nov. 12             | Fort Lauderdale, FL.; Enhancing Science Teaching and Learning with<br>Instructional Technology<br>Teaching Ecosystems, Climate, and Climate Change<br>Keys for Student Success: Curriculum Integration and Student Inclusion                               |
| December 3-5, 2009  | Phoenix, AZ: Rigor Without Mortis: Challenging and Accessible Content<br>Relevance: Science as an Authentic Context for Using the Skills of<br>Literacy and Mathematics<br>Relationships: Building Professional Relationships for Transforming<br>Learning |

### **2010 National NSTA Conference**

- |                   |   |
|-------------------|---|
| March 18-21, 2010 | Philadelphia, PA: Meeting the Unique Needs of Urban and Rural Science<br>Learners<br>Connecting the Content: Between, Within, and Among Subjects<br>Closing the Digital Generation Gap Between Teachers and Students<br>Rekindling the Fires of Science Teaching and Learning |
|-------------------|---|

### **Looking Ahead with NSTA:**

Kansas City, Missouri  
October 28–30, 2010

Baltimore, Maryland  
November 11–13, 2010

Nashville, Tennessee  
December 2–4, 2010

**2011 National Conference on Science Education**

Proposal Deadline: April 15, 2010

San Francisco, California  
March 10–13, 2010

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March 18-20, 2010 ITEA Annual Conference; "Green Technology: STEM Solutions for 21 Century Citizens". [www.iteaconnect.org](http://www.iteaconnect.org)

**PRCST PROGRAMS**

**October 15, 2009 HURRY HURRY HURRY**

PRCST 25<sup>th</sup> Anniversary; Carnegie Museum of Natural History, Lecture Hall; 8:30am-3:00pm, Dr. Devra Davis, Director – Keynote Speaker. FREE – email [Konrad@pitt.edu](mailto:Konrad@pitt.edu)

Additional opportunity – 4:30pm Phipps Conservatory – Botany Hall. Opening reception of PAEP and presentation of Karl Mason award to Dr. Devra Lee Davis, MPH discussing "NEW SECRETS from the WAR on `CANCER`".

**October 24, 2009 ELEMENTARY GLOBE**

A Saturday morning workshop to introduce the NASA Elementary GLOBE series. University of Pittsburgh 8:30am-1:00pm Hosted by the PA NASA Educator Center and The Pittsburgh Regional Center for Science Teachers Four ACT 48 hours \$75.00

Elementary GLOBE is a series of five books designed to help K-4 teachers integrate Earth science into their curriculum as they teach students to read and write. Each book focuses on a different Earth science topic as the main characters – Simon, Anita, and Dennis – explore the natural world.

- All About Earth
- Do You Know That Clouds Have Names
- The Scoop on Soils
- Discovery at Willow Creek
- The Mystery of the Missing Hummingbirds

Each book includes scientific background information for teachers and a glossary. In addition, each book is supplemented by three learning activities. The Elementary GLOBE is designed to introduce students of grades K-4 to the study of Earth System Science (ESS). Elementary GLOBE forms an instructional unit comprised of five modules that address ESS and interrelated subjects including weather, hydrology,

phenology, and soils. Each Elementary GLOBE module contains a science-based storybook and classroom learning activities.

- Science-based storybooks designed to introduce students to key concepts in water, soil, clouds, seasons and Earth system studies.
- Classroom learning activities complementing the science content covered in each storybook that are designed to further engage students in GLOBE's 5 investigation areas.
- A Teacher's Implementation Guide containing an overview of the resources and background necessary to implement Elementary GLOBE at various grade levels, K-4. The Teacher's Implementation Guide also includes a brief overview/ discussion of connections to math and literacy, developing methods of inquiry, and other topics such as alignment with Educational Standards.

GLOBE makes every effort to provide translations of our materials in the 6 official U.N. languages. Spanish and French translations of Elementary GLOBE books and teacher's guide are available on the web site. Translations in Arabic, Mandarin Chinese and Russian will follow.

## **REGISTRATION FORM** **Elementary GLOBE Workshop**

*Conducted by Charylene Philp, PA GLOBE Partner and Jane Konrad, Director PA NASA ERC.*

Oct. 24, 2009	University of Pittsburgh	Grades K-4
Four Act 48 Hours	Fee \$75	Includes registration, all resources/kits, and refreshments

Name \_\_\_\_\_  
Address (H) \_\_\_\_\_  
\_\_\_\_\_

Phone \_\_\_\_\_ email \_\_\_\_\_  
School \_\_\_\_\_  
Principal \_\_\_\_\_  
Subject/grade level taught \_\_\_\_\_  
School Address \_\_\_\_\_

Email \_\_\_\_\_

**Please send to:**  
**Jane Konrad, PRCST,**  
**5512 Posvar Hall, University of Pittsburgh,**  
**Pittsburgh, PA 15260**  
**412/648-7315**  
**[konrad@pitt.edu](mailto:konrad@pitt.edu) (email registration is acceptable to hold your reservation)**

**A confirmation notice will be sent with the proposed schedule  
and directions to the workshop site/parking.**

November 21, 1009      **WATER – A GLOBAL CRISIS**

A Saturday Morning workshop sponsored by the Pittsburgh Regional Center for Science Teachers (PRCST) and the PA NASA Educator Resource Center (ERC).

Saturday, November 21, 2009      University of Pittsburgh      8:30am-1:00pm  
Fee: \$75.00      Limited to 20 teachers      Four ACT 48 hours

***Of all Earth's water, only about 3 mL out of 100 L is fresh water we can consume. Studying the Global water status can help students gain inquiry abilities and understand a number of concepts. Included are science/environment and geography concepts derived from National Standards. Alignment with Pennsylvania standards is included.***

**Water: A Global Crisis**

Local to Global – making connections

NASA GLOBE protocol (selected parts) – PA GLOBE Partner, Charylene Philp, Director, MathScience Collaborative and the PA NASA ERC

Current research - Allegheny River Studies - connections to human health  
Endocrine disruptors; [impact of coal fired energy production waste](#)

[Dr. Dan Volz, Charles Christensen](#)

[University of Pittsburgh Graduate School of Public Health  
Department of Environmental and Occupational Health](#)

Mon River Studies & Panther Hollow Lake

[Jeanne M. VanBriesen, Professor, Director, Water Quality in Urban  
Environmental Systems \(Water-QUEST\)](#)

STEM Careers/options

**We ARE water – 50-90% of the weight of all living organisms! GLOBE Hydrology Investigations can help us make more intelligent decisions about how we use, manage, and enjoy this valuable resource.**

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Name \_\_\_\_\_

Address (H) \_\_\_\_\_

\_\_\_\_\_



Phone \_\_\_\_\_ email \_\_\_\_\_  
School \_\_\_\_\_  
Principal \_\_\_\_\_  
Subject/grade level taught \_\_\_\_\_  
School Address \_\_\_\_\_

Email \_\_\_\_\_

**Please send to:**

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**412/648-7315**

**[konrad@pitt.edu](mailto:konrad@pitt.edu) (email registration is acceptable to hold your reservation)**

December 5, 2009

**EXPLORING CURRENT GLOBAL CHANGES**

8:30am-1:00pm

University of Pittsburgh

Four ACT 48 Hours

Fee \$75.00

Limit 20 teachers

Obesity and other Environmental Health Issues

Obesity and Our Foods – Center for Environmental Oncology, Maryann

Donovan, Chief Scientist

Food Contaminants and Carcinogens

GIS obesity mapping results - CMU, School of Public Policy and Management,

Kristen Kurland

Air Quality and Fine Particulates – CMU, Cliff Davison (invited)

No Child Left Inside - PAEE, Connecting with Nature (invited)

Environment and Health: A Systems Approach

PRCST – Environment and Health Initiative (EHI)

Exploring the EHI kit and activities

STEM Careers

(Connections to International Studies Program and related workshops available)

Alignment with Standards

All resources are provided, along with welcome coffee and break refreshments for each workshop. Early registration is encouraged as space is limited.

You may temporarily reserve a space by sending an email to [konrad@pitt.edu](mailto:konrad@pitt.edu) for a registration form.

## **REGISTRATION FORM WATER – A GLOBAL CRISIS**

A Saturday Morning workshop sponsored by the Pittsburgh Regional Center for Science Teachers (PRCST) and the PA NASA Educator Resource Center (ERC).
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Saturday, November 21, 2009	University of Pittsburgh	8:30am-1:00pm
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Fee: \$75.00      Limited to 20 teachers      Four ACT 48 hour  
Includes registration, all resources/kits, and refreshments

**Name** \_\_\_\_\_

**Address (H)** \_\_\_\_\_  
\_\_\_\_\_

**Phone** \_\_\_\_\_ **email** \_\_\_\_\_

**School** \_\_\_\_\_

**Principal** \_\_\_\_\_

**Subject/grade level taught** \_\_\_\_\_

**School Address** \_\_\_\_\_

**Email** \_\_\_\_\_

**Please send to:**

**Jane Konrad, PRCST,  
5512 Posvar Hall, University of Pittsburgh,  
Pittsburgh, PA 15260  
412/648-7315**

**[konrad@pitt.edu](mailto:konrad@pitt.edu) (email registration is acceptable to hold your reservation)**

Completing each Registration form and mail with a check made payable to the University of Pittsburgh to:

Jane Konrad, PRCST  
5512 Posvar Hall  
University of Pittsburgh  
Pittsburgh, PA 15260

A confirmation letter will be sent with directions.

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**FETC 2010 Virtual Conference**; Oct. 22, 2009 From 10am-6pm ET: Free online event. Explore the 21<sup>st</sup> Century Skills

FETC Fall Conference and workshops; Jan.13-15, 2010, Orange County Convention Center, Orlando, FL: Online registration: <http://fetc.org/Registration.aspx>

**Earth Science Week 2009;** Oct. 11-17 Toolkit now available. Toolkit enables students, educators, and the public to fully explore this year's theme "Understanding Climate." The latest edition of this resource is now available through the American Geological Institute (AGI). It contains a 12-month school-activity calendar and classroom poster provided by AGI, its Member Societies, and other organizations. Along with these traditional Earth Science Week publications, this year's Toolkit features a variety of educational climate resources from the U.S. Geological Survey (USGS), NASA, and the National Oceanic and Atmospheric Administration (NOAA). A report on the "Ecological Impacts of Climate Change" and a new brochure outlining principles for Earth Science literacy are also included. The Toolkits are available for the cost of shipping and handling and bulk pricing is available. Find out more at [www.earthsciweek.org/materials](http://www.earthsciweek.org/materials).

**For information about equipment grants and other educational support please visit:**

The application kits for the SACP MS and HS Science Essay Contests are now posted and can be download from our web page at [www.sacp.org](http://www.sacp.org). Please note we do have a restriction on the geographic locations of the schools.

The deadline for application is Dec 1, 2009.

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

[www.ssp-pgh.org](http://www.ssp-pgh.org)

**GREEN, HEALTHY SCHOOLS CONFERENCE** – Oct. 28, 2009

Phipps Conservatory & Botanical Gardens: Presented by Green Building Alliance in collaboration with the Tri-State Area School Study Council. Non-Members \$110. Contact Karen Puff:

[karemp@gbapgh.org](mailto:karemp@gbapgh.org)

**Mikelson Exxon Mobile Teachers Academy** – Apply by Oct. 31<sup>st</sup>. One week, all expenses paid – Grades 3-5. [www.sendmyteacher.com](http://www.sendmyteacher.com)

**November 16<sup>th</sup>-20<sup>th</sup>, Apollo 11 Moon landing.** Students in grades K-8<sup>th</sup> are invited to re-discover the remarkable accomplishment of the Apollo 11 Moon landing. Forty years have passed since this momentous event and to celebrate, NASA's Digital Learning Network (DLN) will deliver a daily videoconference that will explore a single NASA center's contribution to Apollo 11. These programs will also feature an in-studio NASA employee who had a special connection with Apollo 11. Student participation and interaction with the DLN host and NASA expert is assured!

The DLN has designed a fun activity that incorporates fitness and math! *Walk to the Moon* encourages students to count their steps around their homes and schools in order to reach a goal of 250,000 steps. Each step will be equal to one mile. With approximately 250,000 miles between the Earth and the Moon, your students will "walk" to the moon! Students may chart their progress individually or in groups – the choice is yours. Either way, the DLN would like to hear about your class' journey! Please email your results to [jsc-dislearn@mail.nasa.gov](mailto:jsc-dislearn@mail.nasa.gov), and you may hear your students' stories LIVE during the DLN's week-long special event in November!

**Howard Hughes Medical Institute** – Webcast 2009: Exploring Biodiversity – The Search for New Medicines. Dec. 3<sup>rd</sup> and 4<sup>th</sup>; 10:00 am EST and PT on demand. After Dec. 7<sup>th</sup>  
[www.holidaylectures.org](http://www.holidaylectures.org) Free on DVD April 2010.

## SCIENCE SNIPPITS

**Five Gold** (all from CA) and four Silver medals were won by U.S. high school students in the International Physics and Chemistry Olympics this summer. Congratulations United States students! See

[www.aapt.org/aboutaaptupload/Press-Release-Bringing-Home-the-Gold.pdf](http://www.aapt.org/aboutaaptupload/Press-Release-Bringing-Home-the-Gold.pdf)

**Swine Flu** – Spreading at an “unbelievable rate”. It spreads four times faster than other viruses and 40% of the fatalities are young adults in good health states WHO Director General Manager Chan. It seems to have established itself as the dominant virus strain in most parts of the world, reports the UN Agency Vaccines. But the H1N1 virus fits an historical pattern and the impact of the vaccines is not clear.

The flu season has not begun in the northern hemisphere, so the basis for the finds are from southern hemisphere countries: Australia, New Zealand, Argentina, and Brazil.

There are 16 subtypes of the “H” protein that circulate in birds and swine, but so far only three have become easily transmissible among humans, states the report from WHO.

**China may soon be** simultaneously the greenest and the blackest place on earth. The country is poised to be at once the world’s leader in alternative energy as well as its leading emitter of CO<sub>2</sub>. “On these emerging fronts the trends seems positive.” Source:

<http://www.guardian.co.uk/environment/2009/aug/24/china-green-energy-polluted>

Taken from the Regulatory Update section of Zephyr – newsletter of the Air & Waste Management Association.

**Too Much Fund-raising?** NSTA says focus more on Problem-Based Service Learning. Students are presented with problems posed by community partners, and asked to seek authentic and viable solutions. (STANTYS’ *The Science Teacher Bulletin*, Spring 2009)

**Earth Science Week-** Oct. 11-17 “Understanding Climate”. There is a need to go beyond the “sound bites” in the public news. In “Climate Change: Frequently Asked Questions” (a NOAA report) there are answers to 19 key questions ranging from ‘What factors determine Earth’s climate?’ to ‘How do human activities contribute to climate change, and how do they compare with natural influences?’ [www.facebook.com/pages/Earth-Science-Week/24519701661?ref=nl](http://www.facebook.com/pages/Earth-Science-Week/24519701661?ref=nl)

**New NSTA Position Papers:** See the new position papers on “Developing a World View for Science Education: In North America and Across the Globe” and “recommended ways for parents and other caregivers to create a positive environment at home and encourage a science or technology related career. Current NSTA position statements can be found at [www.nsta.org/position](http://www.nsta.org/position)

**New Discovery!** A Single evolutionary event may explain the short, curved legs of dachshunds, corgis, basset hounds, and at least 16 other dog breeds. Led by the National Human Genome Research Institute – extended DNA samples showed an extra copy of the gene that codes for a growth-promoting protein called fibroblast growth factor 4 (FGF4). The findings may prove valuable to scientists studying other aspects of human growth and development.

[www.nih.gov/news/health/jul2009/nhgri-16.htm](http://www.nih.gov/news/health/jul2009/nhgri-16.htm)

### **STEM Equity**

#### **Research Reveals Another STEM Gender Gap: Computer Science**

- By [David Nagel](#) 06/03/09 T.H.E. Journal

“If the attitudes of high school students are a good predictor of eventual career choices, the future will continue to see computer science fields dominated by males. According to new research released by [ACM](#) and the [WGBH Educational Foundation](#), compared with girls, more than twice as many boys see computer science as a "good" or "very good" choice as a college major. What's more, four times as many boys cited computer science as a "very good" career choice.

By gender, 74 percent of boys cited computing/computer science/information technology as a good or very good choice, compared with only 32 percent of girls. Broken down by ethnicity and gender, as seen in the following chart, white females had the lowest positive response to computer science as a major. Hispanic males had the highest.

The story was similar when it came to students' views about computer science as a career choice. Fewer overall saw computing, computer science, and information technology as a good or very good career choice (46 percent overall). For boys, it was 67 percent; for girls, it was 26 percent. White girls, again, had the most negative view of computer science, while Hispanic males had the most positive.”

## **DATABASE**

Freebies – from NSTA Reports:

Outdoor programs from OBIS – Lawrence Hall of Science. 97 activities for grades 5-8  
[www.outdoorbiology.com](http://www.outdoorbiology.com)

Learning About Wolves. Fun-fact page, wolf-mask pattern, articles from Wolf magazine, and a WolfQuest game. Also Gray Matters , a curriculum for Grades 4-12. [www.wolf.org](http://www.wolf.org)

Population and climate change curricula. Experiments, demonstrations, and lab activities – complex dynamics between human activities and the environment. [www.cepnet.org](http://www.cepnet.org)

Biomedical research –a monthly report on breakthroughs in biological science and the scientists who made it happen. [www.whatayear.org](http://www.whatayear.org)

## CALENDAR OF EVENTS

Oct. 15 PRCST 25<sup>th</sup> Anniversary – CMNH Lecture Hall (see Directions)

Oct. 16	3 Days	Three Rivers Bioneers Conference
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Oct. 17	Message on the Mon: Learning Into Action Teacher Workshop, CCI, Inc.	
	9am	

Oct. 22 [FETC Virtual Conference Fall '09](#) coming live to your computer on  
**FREE** 100% online educational conference

October 29-31 NSTA Regional Conference, Minneapolis, MN

Oct. 23 GASP 40th Anniversary, Union Project in Highland Park.

Oct. 24 Elementary GLOBE workshop

Nov. 12 NSTA Regional Conference, Fort Lauderdale, FL

Nov. 21 Water – A Global Crisis workshop

Dec. 3-5 NSTA Regional Conference, Phoenix, AZ

Dec. 5 Exploring Current Global Changes workshop

### Many Thanks to Our Contributors

- ❖ Air and Waste Management Association (AWMA)
- ❖ Carnegie Mellon University
- ❖ Conservation Consultants, Inc.
- ❖ NASA – Goddard Space Flight Center
- ❖ NorthCentral Math/Science Consortium
- ❖ PA DEP Education Grant Fund
- ❖ PA PDE – Office of Environment/Ecology
- ❖ PA NASA Space Grant Consortium
- ❖ Spectroscopy Society of Pittsburgh (SSP)
- ❖ Society for Analytical Chemists of Pittsburgh (SACP)
- ❖ The Pittsburgh Foundation: Nancy Hannon Gordon Fund
- ❖ University of Pittsburgh – School of Education
- ❖ Western PA Unit – Herb Society of America

