

# Iowa Science Teachers Section

of the Iowa Academy of Science

**November 2004**

Nadine Weirather, Editor

## **Contents of the ISTS e-newsletter that follows:**

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## **A Message from your President: We Oughta be Committed!**

If there were doubt in the minds of school-watchers as to the commitment of Iowa's science teachers, they need look only to the ISTS Fall Conference. Almost 500 participants took part in our fall celebration of science excellence—featuring about 90 presentations, almost 50 exhibitors, 8 recognized award winners, 6 corporate sponsors, 5 outstanding guest speakers, and a partridge in a ... Well anyway! Tip your hat to Ernie Schiller who pulled off the role of Conference Chair despite a busy year as Iowa's Teacher of the Year.

After maybe five minutes of prideful reflection over an incredible conference, we got right to work on 2005. We're heading back to the Polk County Convention Complex next October 19/20, and it is NOT too early to begin planning. Why not get a proposal in right away for something you do that we could all learn from? And pull out that '05-06 calendar, barren as it may be, and plunk down a date with ISTS colleagues October 20. Professional dedication in these trying and hopeful times is something to which we all oughta be committed!

Jeff Weld, ISTS President '04-05

See a photo collage and 2005 proposal information at <http://ists.pls.uni.edu/>

## **ISTS Fall 2004 Conference Comments Ernie Schiller, Conference Chair**

The 2004 Fall Conference was held on October 21 at the Polk County Convention Center in Des Moines. The theme of this year's conference, Diversity in Science Education, focused on what we do and how we do the science of education in Iowa and across the Midwest. Numerous educators and exhibitors featured workshops and presentations to the conference attendees. The featured speakers for the conference was Peggy Steffen, former ISTS President and Fall Conference Chair, now affiliated with NASA, Dr. Charlie Drewes of Iowa State University featuring his work with Invertebrates, Dr. Leon Lederman of Fermilab and Nobel Laureate, and Dr. Ed Brands of the University of Iowa Geography. Noon Luncheon Speaker was Dr. Wayne Sanderson, formerly of the CDC and now with the University of Iowa's College of Public Health speaking on his career in the health sciences and the CDC.

Awards were presented to numerous individuals and organizations featuring excellence in science education. Rick Wells received ISTS's Distinguished Service Award, and Friends of Science Award was presented to REAP. Corporate Friends of Science was presented to Rockwell-Collins of Cedar Rapids and Maytag of Newton. Iowa Academy of Science Excellence in Science Teaching Awards recognized awardees in Physical Science to Jeff Siewert of Pella High School, Middle / Junior High Science to Doug Richardson of Norwalk Middle School, and in Life Science to Lori Ihrig of Williamsburg High School. Also recognized were the Presidential Finalists Kari Pingel of Jefferson Elementary School in Pella and Lynne Campbell of Woodward-Granger in Woodward.

Many thanks to the Conference Committee, including special thanks to Lyn Countryman-Program Chair, Barb Jacobson-Exhibit Hall Coordinator, Kacia Cain-Facilities Coordinator, Aaron Spurr-

Registration Coordinator, Rick Wells-Corporate Sponsors Chair, and Jeanne Rogis-Bookstore Chair.

-Ernest Schiller, 2004 Fall Conference Chair

## **Announcements**

As most of you are aware, Triangle Coalition for Science and Technology Education is responsible for managing the Albert Einstein Distinguished Educator Fellowship Program, working in conjunction with the U.S. Department of Energy, the National Science Foundation, NASA, NOAA, and other governmental agencies. Each year at this time we open the program for applications for the following school year.

We need your help. We are trying to strengthen and widen the applicant pool and are looking for a few great educators. If you know an educator in your state or region that might make a good candidate I would ask that you encourage them to visit the Triangle Coalition website at <http://www.triangle-coalition.org/ein.htm> for more information on the program and the application process.

If you will submit the names to us, we will be more than happy to contact them and invite them to apply. We will make sure to let them know that you nominated them and that they have been recognized for their outstanding work in STEM education. The application is now available online and can be accessed from the web address noted above as well.

If anybody would know the best math, science, and technology teachers in the country, it would have to be Triangle Coalition's members. Please consider having them participate in this unique and rewarding opportunity to share their expertise with education leaders, policymakers, and agency heads. The background and knowledge they bring to Washington, DC can make a difference.

If you need more information or have names to share with us please do not hesitate to email them to me at [murrayd@triangle-coalition.org](mailto:murrayd@triangle-coalition.org) .

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NSTA is pleased to offer online one lead article from every issue of each journal as a sample to share with interested science educators. Science Scope features "articles on great scientists, experimental design, and even a special pullout chapter from the Smithsonian Institution Press," in the issue, and the free-read online article is "[Technology and Society: Their Impact on Each Other](#)." The Science Teacher notes that the special issue focuses on how history and nature of science helps students gain a solid understanding of the scientific enterprise," and the article is "[The Nature of Science: Always Part of the Story](#)."

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ATTENTION ALL: Testing Opportunities: The NASA-sponsored Classroom of the Future program is seeking teachers to help test some award-winning science curriculum supplements. By committing to help in this evaluation, teachers receive the materials for free. All that's required is that teachers use the supplements in their classrooms and then provide data on their effectiveness. Researchers will provide participants with a pre-test and post-test for students to complete along with consent forms to be administered. The products being tested are Astronomy Village: Investigating the Universe®, Astronomy Village: Investigating the Solar System®, BioBLAST®, and Exploring the Environment®.

COTF is also beta testing an ecology unit called Journey to El Yunque for grades 6-8. This project seeks to improve students' understanding of ecology and changing ecosystems. In particular,

the web site focuses on ecosystem environments and scientific inquiry. Materials will be provided for teachers to use in the classroom. Teachers must apply in pairs, one will be randomly assigned to serve as a control for 2005-06 and implement in 2006-07; the other will do the two-day workshop in summer 2005 and implement in 2006-07. Internet access is required. For participating teachers, a \$120 stipend is provided for attending the two-day training workshop in West Virginia. Expenses for travel, lodging, and meals are provided. Martin ([jmartin@cet.edu](mailto:jmartin@cet.edu)) is also coordinating this testing.

Two modules in the International Space Station Challenge™ also require teachers of grades 6-8 for beta testing. Farming in Space and Electricity and Power in Space are both offered through the Classroom of the Future. Each module requires 15 teachers for testing who will receive a free set of classroom materials for their participation.

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## NASA AND PEARSON SCOTT FORESMAN ANNOUNCE OUT-OF-THIS-WORLD EXPERIENCE

Students from two classrooms will get a chance to see astronauts conduct their science projects through a national challenge program. NASA and Pearson Scott Foresman, publisher of pre-K through grade six educational books, are sponsoring the challenge. "The Science in Space Challenge" calls for teachers to submit proposals, on behalf of their students, for a science and technology

investigation. An astronaut will conduct the project on a Space Shuttle mission or on the International Space Station, while teachers and students follow along via TV or the Web.

Deadline for entries is June 3, 2005. A panel of key NASA science education experts will evaluate and select one entry each from grades K-6 and 7-12. NASA and Pearson Scott Foresman will announce the winners on or before September 6, 2005. Teachers can submit entries by email, regular mail, or fax.

"We want to be involved in shaping the next generation of explorers, and this challenge is an important step towards achieving that goal," said Dr. Adena Williams Loston, NASA's chief education officer. "Our mission is to ensure U.S. students reach the highest possible levels in science, technology, engineering and mathematics, to help fulfill the Vision for Space Exploration. Whether a proposal is selected or not, in the long run, everyone wins."

The challenge is part of an ongoing non-exclusive partnership. NASA and Pearson Scott Foresman seek to spark students' imaginations, encourage interest in space exploration, enhance elementary and secondary science curriculum.

"Working closely with NASA, we designed this challenge to inspire students on a number of different levels," said Paul McFall, President, Pearson Scott Foresman. "It will encourage them to tap into their creative energies, see learning in a whole new light, help them to look at their classrooms in ways they might not have done before, and teach them they can make a difference while learning and having fun," he said. NASA education programs stimulate students' interest in science, technology, engineering, and mathematics study and careers. Activities raise public awareness among educators, students, and parents about the many available NASA education programs and resources. Pearson Education provides quality content, assessment tools and educational services, spanning the learning curve from birth through college and beyond. Products include Pearson Prentice Hall, Pearson Longman, Pearson Addison Wesley, and others. Pearson Education is part of Pearson, the international media company. For entry forms and information

about challenge criteria on the Web,  
visit: [www.scottforesman.com](http://www.scottforesman.com) For information about NASA's  
education programs on the Internet, [visit their Web site](#).

Jay Staker, Program Director  
See addresses above

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To give students a deeper and more relevant appreciation of women's roles in history and celebrate March as Women's History Month, the Iowa Commission on the Status of Women, Iowa Department of Education, and the State Historical Society of Iowa invite teachers to sponsor the Write Women Back Into History Essay Contest in their classrooms.

2005 Theme: Women Changing America This year's theme honors and recognizes the role of American women in transforming culture, history and politics as leaders, writers, scientists, educators, politicians, artists, historians, and informed citizens. Students are encouraged to choose a woman, preferably from Iowa, from any historical period including the present and write about the accomplishments of her life and how she has made a difference to the student and to society. A student's own thoughts on the significance of the woman's contributions are important. Essays should identify 1) why the woman should be written into history (i.e., what meaningful contributions has she made to her community, the state, nation, or world?), and 2) why she is important to the student. Students should consider what people would learn about us from this essay 50 years from now. A successful essay will discuss why the student researched, read about or interviewed, and found the subject to be a role model ; it should not merely be a biographical sketch.

Find the 2005 guidelines at <http://www.state.ia.us/dhr/sw>.

Please pass on to other educators who might want to run the contest.

Please feel free to contact me with any questions.

Thanks for your support!

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Making a difference in the lives of Iowa women

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Summer Institute in Physics and Physical Science for Inservice  
Teachers

June 27-August 4, 2005 (dates tentative)  
Department of Physics, University of Washington, Seattle

The Center for Physics Education in the University of Washington  
Physics Department offers a six-week, 10-credit summer institute in  
physics and physical science for full-time inservice teachers. The  
2005 institute is tentatively scheduled for June 27-August 4 at the  
UW in Seattle. Classes meet from 9 a.m. to 3:30 p.m. Monday-  
Thursday. Directed by Professor Lillian C. McDermott and supported  
by the National Science Foundation, the institute is tuition-free and  
a \$1200 stipend is offered on successful completion of the course  
work. Additional money is available if needed to help defray the  
cost of lodging for persons from outside the Seattle area.

The Physics by Inquiry curriculum used in the course has been  
especially designed to strengthen the subject matter background of  
teachers in topics typically covered in precollege physics and  
physical science using a hands-on, inquiry-oriented method of  
instruction. The materials emphasize the development of  
fundamental concepts and reasoning skills through laboratory

experience. The class is divided into two sections: one for elementary-middle school teachers with little or no background in physics; the other for high school teachers of physics, physical science, and mathematics.

For an application or information, contact

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Application deadline is March 15, 2005.

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### Lesson Plans for Iowans Changing the Global Climate

According to the Year 2000 Iowa Greenhouse Gas Inventory commissioned by the Iowa Department of Natural Resources, Iowa produced 32 million metric tons carbon equivalents (MTCE) in gross emissions from energy, agriculture, industry, and waste sources.

With the goal of putting Iowa's role in this global issue into perspective, three lesson plans have been created to supplement high school level science units that introduce students to greenhouse gases and global warming. Soon enough the lifestyles of their generation may be determined by their choices, and they need to know that they can make good choices that foster a more stable and less disruptive climatic system.

You can find these lessons on the internet at the University of Northern Iowa's [Center for Energy and Environmental Education website](#). Click on the "News" link to access these plans and a powerpoint presentation explaining the results of the

inventory. Upon its release, the inventory will also be posted at this location.

Your ISTS Leadership Team can be found at <http://ists.pls.uni.edu/officers.html>

We are always looking for good people. Send an e-mail to [jeff.weld@uni.edu](mailto:jeff.weld@uni.edu) if you wish to be more involved.

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Invitation to improve/contribute to this newsletter

How best can this newsletter serve you? Do you have something to contribute for the good of the ISTS membership? Send a message to [jeff.weld@uni.edu](mailto:jeff.weld@uni.edu) or [nweirather@central-lee.k12.ia.us](mailto:nweirather@central-lee.k12.ia.us) .