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ISTS E-Newsletter, May 2005

Iowa Academy of Science

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Iowa Science Teachers Section

of the Iowa Academy of Science

May 2005

Nadine Weirather, Editor

Contents of the ISTS e-newsletter that follows:

- A Message from Your President
- ISTS Fall Conference News, Message From Our Past President
- ISTS Members in the News
- Science Education News from the Department of Education
- Announcements
- Your ISTS Leadership Team

Here they are...

Jeff Weld and Michael Clough...

The gavel has been passed. Great job, Jeff!!!
And feel our strength and excitement behind you, Michael, as your year of presidency begins. Thanks to both of you!

A Message from Your (new) President:

We Ought to be Committed - And We Are!

In the January 2005 ISTS Newsletter, Jeff Weld titled his President's message "We Oughta be Committed!" and went on to extoll the extensive commitment so many of you make to children, teaching, and the teaching profession. I am using a slight variation of Jeff's title to thank you again for your commitment to teaching children, and to emphasize that your ISTS leadership team is also committed to children, to helping you carrying out your very

demanding responsibilities, and to the teaching profession. Please read on to learn of two very important ways your ISTS leadership team is committed to serving you.

As some of you may have read in the spring 2005 Iowa Academy of Science Bulletin, the Iowa Science Teachers Section has revived the Iowa Science Teachers Journal (ISTJ). I have agreed to serve as the initial Editor of ISTJ and Joe Taylor at Iowa State University has agreed to take on the role of Managing Editor. The first two issues of the journal (tentatively scheduled to be available in late August/early September and late November/early December) will be FREE for all science teachers. Beginning in January 2006, only members of the Iowa Academy of Science Iowa Science Teachers Section will have access to the journal. For this journal to be a success for science teachers across the state, we need your ideas! All of you do things that motivate students to engage deeply in some aspect of science that leads to deep understanding of fundamental science ideas appropriate for the grade level you teach. **SUBMIT THOSE IDEAS TO THE JOURNAL!** Send an e-mail to Joe Taylor at joetay@iastate.edu letting him know you are interested in submitting a manuscript. He will send you information needed to prepare your manuscript. Your leadership team took on this responsibility because you deserve a journal that is devoted to helping you teach children. Please help us help you by sending in a manuscript.

Jeff Weld is taking the lead with the help of MANY others in planning an invigorating fall conference that will take place at the Polk County Convention Complex beginning Wednesday evening, October 19th and continuing all day Thursday, October 20th. Time still permits to submit a proposal by the May 31st deadline! It's easy and can be completed in less than 10-15 minutes by going to the [ISTS home page](#). (And your presentation can serve as a template to submit that manuscript to ISTJ):

On Saturday, April 30th your leadership team met in Mt. Vernon to address these and other ways to better serve the ISTJ membership. We ought to be, and are, committed to the children of Iowa and the

teaching profession. I look forward to serving as President with such a committed group of individuals.

Michael Clough
ISTS President 2005

ISTS Fall Conference 2005 Taking Shape

You are in for a treat... October 20, 2005 is already shaping up to be a fantastic use of your precious time at the Iowa Science Teachers Fall Conference at the Polk County Convention Center. Just look at what your Leadership Team is working on:

1. Outstanding presentations have already been scheduled (and there's plenty of room for more!);
2. A true Giant in the field of Science Education will be our featured luncheon speaker;
3. A stellar array of exhibitors are lined up for sharing innovative materials and supplies with you;
4. A tasty luncheon menu is being planned;
5. A fulfilling day of networking with like-minded colleagues from across the state is in store.

So make plans to put ISTS on your calendar for next fall. Keep in mind that the "official" start of the conference is Wednesday night the 19th of October with the President's Reception, to which you are invited! If affordability is an issue, be sure to discuss with your Principal the use of Title II monies set aside for Professional Development. Looking forward to seeing you there.

Jeff Weld
Conference Coordinator

Congratulations to winners of the 2005 Excellence in Science Teaching Awards

- Elementary School Science -- Travis Benner, Muscatine Schools, Blue Grass
- Middle/Junior High School Science -- Amanda Schiller, Marquette JH, West Point

- Life Science -- Alicia Schiller, Central Lee HS, Donnellson

We are pleased to have these excellent teachers among our ranks! The names of past ESTA winners and a link to nomination information are available

at: http://www.iacad.org/esta_archives.html

Several Science Teaching Section members were named as new IAS Fellows at the IAS spring meeting in Cornell on April 30:

** William Desmarai

** Erica Larson

** Sherman Lundy

** Aaron Spurr

And congratulations to ISTS member Tom Ervin.

Tom received two honors at the NSTA Convention in Dallas this spring. From the National Earth Science Teachers Association (NESTA) he won the "Distinguished Service Award". And then later in the convention he was made an NESTA "Fellow". He has served on the NESTA Board of Directors for 15 years and served as president for two different terms during those years. We appreciate your service to science education, and are proud to know you as an active member of ISTS!!!

SCIENCE EDUCATION NEWS FROM THE DE

By W. Tony Heiting, Ph.D
State Science Consultant

There is a lot of activity going on nationally and at the state level in science education. Below is a description of some of these major activities.

SCASS Science Program

With the No Child Left Behind (NCLB) requirement for testing in science in the 2007-2008 school year, many states and school districts are looking more closely at the SCASS Science program. The 1300 SCASS Science assessment items have been aligned with

the Nation Science Education Standards (NSES). Iowa, a member of the SCASS Science program, has access to these 1300 items. Take a look by: 1.) going to <http://sciencescass.org>; 2.) user ID is: iascience; 3.) password is:iais1. You can use the items to create your own test for assessment and/or instructional purposes.

Surveys of Enacted Curriculum (SEC)

Iowa is also a member of the Council of Chief State School Officers (CCSSO) SEC program. Surveys have been created in reading, mathematics and science that can be used to gather data of teacher classroom practices in these discipline areas. The survey will give a school district an idea where they are in reforms in science education. Check the surveys out at the following website:<http://www.SECsurvey.org>.

Math-Science Partnerships

The Math-Science Partnership Program (MSP) provided \$750,000 in grants for science and mathematics projects. This program, sponsored by the DE and the Board of Regents funded the following science projects:

- Science and Mathematics Avenues to Renewed Teachers and Students (SMARTS), John Dunkhase and Walter Seaman, University of Iowa, \$449,989-three year project.
- River Quest Institutes, Mary Caffery, Clarke College, \$423,138-three year project.
- IMPACT (Impacting Achievement with Collaborations and Technology), Doreen Hayek, University of Northern Iowa, \$144,106-one year project.
- Science Professional Development Program: A Collaborative Approach, Jack Gerlovich, Drake University, \$100,000-one year project.

Science Standards and Benchmarks

The Iowa Testing Service has recently developed core Content Standards and Benchmarks corresponding to the Iowa tests. You

can find these on the DE

website: <http://www.state.ia.us/educate/ecese/nclb/doc/ccsb.doc>

The Iowa Summit on Mathematics, Science and Technology Education (MSTE)

The Iowa Mathematics and Science Coalition received a grant from the National Alliance of State Science and Mathematics Coalitions, and the US Department of Education to plan an Iowa Summit to be held in November 2005. 150 leaders will be invited to the summit with the mission to positively impact and influence mathematics, science and technology education along with promoting economic development in Iowa.

Eli's Coming! –State Science Initiative

As you may be aware, the State of Iowa has a state initiative in reading (Every Student Reads) and a mathematics initiative (Every Student Counts). For the past six months, a State Science Initiative Planning Committee has been meeting to formulate a state science initiative that will roll out in the summer of 2006. The initiative is called "Every Learner Inquires" (ELI). As the name implies, it will focus on learning science through inquiry and learning to teach science through inquiry. This summer, an ELI development group will start meeting to design a professional development curriculum for inquiry-based instruction and identify providers for ELI's implementation. Stay tuned for updates and details on this exciting K-12 state science initiative.

For further information about the above science activities and programs, contact Tony Heiting at the address below.

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Announcements:

- The 40th anniversary conference of the Great Lakes Planetarium Association, the largest and oldest US association of planetarium professionals/astronomy educators, will take place in Grand Rapids, MI October 19-22, 2005. The organization was formed in Grand Rapids in 1965. Most events will take place at the Van Andel Museum Center of the Public Museum of Grand Rapids, host organization for the 41st consecutive meeting of GLPA. Keynote speaker will be Dr. Anne Kinney, Director of NASA's astronomy and physics division. The four day event will also include demonstration of the latest in planetarium projection technology, presentations by other notable professionals, and exchange of ideas between planetarium astronomers, educators, producers, artisans and technicians.

For more information, visit Great Lakes Planetarium Assn. website: www.glpaweb.org

Or contact: Rickey Ainsworth
Local Conference Coordinator
Chaffee Planetarium, Public Museum of Grand Rapids
272 Pearl, NW, Grand Rapids, MI 49504
(616) 456-3564
rainswor@ci.grand-rapids.mi.us

Environmental Concern Inc. in partnership with the Metro Waste Authority in Des Moines brings you:

WOW! The Wonders of Wetlands
Making schoolyards come alive!
June 22th from 9-4
\$45 includes the WOW! Wonders of Wetlands curriculum guide.

&

WOW! Facilitator Training
Empower yourself with the skills to teach WOW! workshops.
June 23rd from 9-4
\$40 includes Facilitator manual and some materials.

Join us for these exciting hands-on workshops!

Register at least two weeks in advance to reserve your spot!!

For registration and course information, contact Karleen Vollherbst at (410)745-9620 or order@wetland.org

Visit us on the web at www.wetland.org

•NCLB NEWS

Education Secretary Announces New Flexibility Under No Child Left Behind

Last week Education Secretary Margaret Spellings announced that states will have additional alternatives and flexibility under the federal education law if they can show they are raising student achievement and closing the achievement gap. Read more in this press release

(http://science.nsta.org/nstaexpress/nstaexpress_2005_04_11_nclb.htm) from the U. S. Department of Education and the one-page summary

(http://science.nsta.org/nstaexpress/nstaexpress_2005_04_11_summary.htm) titled "Raising Achievement: A New Path For No Child Left Behind.

Education Week Explores Upcoming NCLB Science Assessments

In the March 30 issue of Education Week, writer Sean Cavanagh explores what impact the upcoming science assessments are having on the teaching of science nationwide. While some school administrators are "beginning to place renewed emphasis on science, with the approaching mandates of the No Child Left Behind Act squarely in mind," most schools "remain consumed with immediate pressures in reading and mathematics, say state and national curriculum and testing officials, while science instruction, especially in the elementary grades, remains on the margins." Read the entire story titled *As Test Date Looms, Educators Renewing*

Emphasis on Science at <http://www.edweek.org> (free registration required)

- **Discover Iowa's resources**

Achievee is a group of 16 Iowa organizations that offer resources, lesson plans, field trips and other information about conservation issues to K-12 educators. Combined, these organizations provide more than 35 programs and services that are student-centered, easy to adapt and promote collaborative learning. Many of the programs and services are interdisciplinary and multidisciplinary, and include reading components.

For an electronic copy of Achievee's directory of resources, titled, "Discover the possibilities," e-mail Susan Salterberg, University of Northern Iowa, at salterberg@uni.edu. Put "Achievee Directory of Resources--ISTA" in the Subject line.

- **University of Nebraska offers distance education for science teachers**

Are you thinking about continuing your education but not sure how you can fit it into your schedule? The University of Nebraska-Lincoln has the answer – distance courses created just for science teachers. Work on your classes when and where it works for you. No driving to campus, parking hassles or scheduling conflicts. Learn from university faculty who are recognized for teaching, research and outreach excellence.

Chemistry Teachers

UNL's College Independent Study program offers a series of courses made specifically for high school chemistry teachers. Choose from 15 1-credit courses on topics like biomolecules, DNA and thermodynamics. These courses focus on both the scientific subject matter and issues related to teaching the subject successfully. Courses were developed as part of a grant from the National Science Foundation.

These online courses are entirely self-paced. Enroll anytime. Finish in as little as five weeks or take up to six months. Tuition for each course is \$190.75 and no additional materials are required.

Visit independentstudy.unl.edu/chemteachers.html for more information or contact Dr. David Brooks at dbrooks1@unl.edu or (402) 472-2018.

Biology Teachers

UNL's Department of Entomology offers an entire distance-delivered Masters of Science degree in Entomology that is perfect for biology teachers. Students in the program use online tools designed specifically for K-12 teachers and can choose courses like Insects in the Classroom.

Complete your Masters degree or just take a few courses. Network with other science teachers and combine education and science courses for a customized degree. Courses are offered in a traditional semester format, including summer sessions.

Visit entomology.unl.edu to find out more or contact the Department of Entomology at entomologyde@unl.edu or (402) 472-2123.

Other Programs

Nebraska has other distance programs for educators in areas such as administration, special education and school improvement. Supplement the curriculum at your school with independent study courses for your students. Visit extended.unl.edu for more information.

● **Environmental Conference**

What: Midwest Environmental Education Conference, Mason City, Iowa, July 20-23, 2005

Why: Learn ways to incorporate environmental issues into your science classes.

Bonus: Graduate credit is available plus a limited number of \$100 scholarships will be given to educators and pre-service educators.

Act now!

Details: This will be a great opportunity to learn about environmental issues, gain curriculum ideas, meet great people, and enjoy north Iowa. Highlights include 13 field trips, time with Chad Pregracke of Living Lands and Waters, an evening with John Muir, symposium with Dr. John Peterson Myers (Our Stolen Future), workshops on alternative energy and Lewis and Clark, and much, much more.

See <http://www.niacc.edu/meec> for full details, or contact Carol Schutte: schutcar@niacc.edu 641-422-4319

● **NABT Fall Conference Announced**

The National Association of Biology Teachers (NABT) is the only national association dedicated exclusively to the concerns of biology/life science teachers. Once a year we hold an annual convention - in 2005, it will be October 5-8 at the Midwest Airlines Center in Milwaukee, Wisconsin. For more information, contact Louise Pittack. E-mail: lpittack@nabt.org or check out the website: www.nabt.org

● **ICN and IPTV Offerings**

Have you introduced your students to IPTV's K-12 Connections? Although it's the end of the school year, it's still not too late to take part in these science-related FREE sessions offered over the Iowa Communications Network (ICN). IPTV K-12 Connections offers complete online registration and support. Teachers are able to learn about session offerings, register for sessions and check the progress of the registration directly from this Web site. Visit their web site at <http://www.k12connections.iptv.org/> and explore what you can provide to students of all ages over the ICN.

Creepy Crawlies

http://www3.iptv.org/iowa_database/event-detail.cfm?ID=4953
Join educators from the Blank Park Zoo for this fantastic learning experience! What makes an insect an insect? This lively presentation teaches students about the characteristics and adaptations of these tiny creatures. Slides, costumes, and live

insects make this a valuable learning experience. The program also allows time for student questions, so come prepared.

DISCOVERING Series (these sessions are pre-recorded)

Discovering Iowa's Wild Wetlands

http://www3.iptv.org/iowa_database/event-detail.cfm?ID=5508

Discovering Mammals and Reptiles

http://www3.iptv.org/iowa_database/event-detail.cfm?ID=5508

Discovering Mysteries of Migratory Birds

http://www3.iptv.org/iowa_database/event-detail.cfm?ID=5487

Discovering the Buzz About Bees

http://www3.iptv.org/iowa_database/event-detail.cfm?ID=5475

For Educators and Staff

Rehab the Lab

http://www3.iptv.org/iowa_database/event-detail.cfm?ID=4902

Sponsored by the Metro Waste Authority of Des Moines and EMC Insurance, this is a comprehensive program helping schools with the proper and safe identification and control of hazardous chemicals.

● **More ICN Offerings**

Increasing interest in chemistry and science in young children can be a challenge for teachers. One way to support the middle and elementary school curriculum is to provide a lively look at the topic through sessions presented by the Science Center of Des Moines over the Iowa Communications Network.

Science Center Outreach Coordinator Tommy Rinkoski brings the world of science to students around the state in his hands-on and energetic presentations through the IPTV K-12 Connections programs over the ICN. In a recent session called Crazy Chemistry, Rinkoski performed experiments for students introducing them to various chemical reactions including super-absorbent powders and spectrum chemistry.

Rinkoski also gives students a look at the properties of liquid nitrogen in a session entitled Oh, So Cold. One teacher who viewed the session said, "We LOVED this! The kids learned so much and were excited about the new information. Every school child should experience this. It was very well done. The man presenting the program did an awesome job! We give this high ratings and will continue to check out what the Science Center has to offer on the ICN! IMPRESSIVE!!"

The Science Center conducts multiple sessions throughout the school year over the ICN. The new Science Center facility is set to open in May in downtown Des Moines.

Tommy Rinkoski from the Science Center of Iowa heats up his presentation with some chemical reactions!

● **Inventing Flight Workshop Scheduled**

The Iowa Academy of Science will be sponsoring Iowa's first Inventing Flight Workshop on October 8th, 2005 at the Putnam Museum of History and Science. Participants will investigate Inventing Flight, a multi-media curriculum package specifically designed to introduce 5th-9th grade students to the invention/inquiry process. Teachers will engage in a number of hands-on student activities meeting state and national standards in science. Participants are provided a teacher packet and all the materials needed to implement the activities with their students. The workshop is free, lunch is provided, and registration is required. See attached brochure or contact Marcy at seavey@uni.edu. This workshop is funding by ALCOA.

● **New Global Issues and Sustainability Textbook!**

"It's All Connected: A Comprehensive Guide to Global Issues and Sustainable Solutions"

To purchase or preview this new textbook, please visit www.facingthefuture.org/purchase

Facing the Future's NEW advanced student textbook, It's All Connected: A Comprehensive Guide to Global Issues and Sustainable Solutions, is the ultimate resources for teaching about

global issues and sustainability. This 150+ page, full-color text is fully referenced and includes compelling photos and graphs, a comprehensive glossary, and units on:

- Getting Started With Global Issues
- Understanding Population and Carrying Capacity
- Meeting Essential Human Needs: Food, Water, and Energy
- Environment: Biodiversity, Forests, Oceans, Air, and Environmental Justice
- Quality of Life: Culture, Health, Education, and Human Rights
- Building Sustainability: Governance, Economic Development, and Peace
- Possible Futures and Sustainable Solutions

Graphs, charts, case studies, and pictures make these topics relevant and promote critical thinking on complex issues. Used as a resource in teaching core subjects, such as social studies, science, and math –or as a stand-alone text for a global studies course – It's All Connected provides an in-depth look at the interconnections between key global issues.

It's All Connected is the perfect companion to Facing the Future: People and the Planet's teacher's guide, Curriculum Guide: Classroom Activities for Teaching about Global Issues and Solutions. The teacher's guide provides exciting hands-on activities, thought-provoking discussion questions, and easy-to-use standards-based lesson plans that promote critical thinking in students and engage them in community and global issues.

Visit www.facingthefuture.org/purchase to preview this book. Facing the Future: People and the Planet's curriculum materials can be ordered online or by calling (206) 264-1503 for more information.

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Facing the Future: People and the Planet is a Seattle-based non-profit organization founded in 1995 to bring global issues education to middle and high schools. The organization researches and writes global issues and sustainability curriculum materials that meet national education standards; provides professional development training to teachers on global issues, sustainability, and service learning; and helps schools integrate global issues across their curricula. Facing the Future: People and the Planet curriculum is in use in 47 U.S. states and 30 countries by teachers and students in grades 5-college and across multiple subject areas.

At the ISTS Spring Directors' Meeting...

A decision about publication dates for this newsletter was made at the Director's spring meeting. The newsletter will be published 4 times a year, September, November, February, and May. Look for this ISTS membership benefit in your email-box again next year.

Check out past issues of the ISTS newsletter at <http://ists.pls.uni.edu/newsletters/index.html>

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 if you wish to be more involved.

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 or nweirather@central-lee.k12.ia.us.