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ISTS Newsletter

Iowa Academy of Science

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5-15-2010

# ISTS E-Newsletter, May 15, 2010

Iowa Academy of Science

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## Iowa Science Teaching Section

## Iowa Academy of Science

**May 15, 2010**

Nadine Weirather, Editor

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### Calling Presenters!

Why not register right away to be a presenter at next year's ISTS Fall Conference?

Perhaps you've been thinking of a topic. Instead of forgetting about it, go ahead and sign up now. Have it out of the way! Whether you are presenting alone or with a partner, don't wait...

**The ISTS Fall Conference will be in Ames on October 7-9, 2010!**

Proposal deadline: June 4, 2010.

Find the proposal form at  
<http://ists.pls.uni.edu/forms/all-conf/present/>

## **A Message From the ISTS Chair, Kathy Megivern:**

As the school year draws to a close, I hope everyone can find time to look back and celebrate all that went well this school year. And I hope everyone can find time to look ahead and feel at least a bit of excitement in anticipation of the next school year -- some new ideas you want to try, something you can't wait to do again with another group of students, that fresh start with renewed energy. If you're just too busy for such thoughts now, at least look ahead to the 2010 ISTS Fall Conference, October 7-9. We're excited about the expanded format, some new features, new location, and the renewal that comes from spending a day or more in the company of colleagues!

Consider submitting a proposal to share your successes as an ISTS presenter and add a special dimension to the experience-- the deadline is just around the corner!

Have a wonderful summer!

Kathy Megivern

## **Meet Our New Vice Chair, Adam Puderbaugh:**



Adam teaches earth science, biology, and environmental science for Des Moines East High School. Previously he taught science for Moulton Middle School. He has presented at the NSTA National Conference, is a *Science Bound* Leader, and a CBIRC Researcher/Teacher. Here is his statement:

*"I believe ISTS provides excellent opportunities for science teachers to learn, grow, and exchange ideas professionally. I have left every conference feeling recharged with great ideas and new contacts. I am honored to help continue this great program and create new opportunities for teachers to further our great profession."*

## **From the Fall Conference Chair, De Anna Tibben:**

Hello and Greetings to You!

I hope that this time of year is finding you in good spirits and not too overwhelmed! As you begin to put away your lesson books and materials, please consider sharing your ideas with others. The IAS-ISTS Fall Conference is an opportunity for you to share your ideas with other k-12 teachers and for you to get new/different ideas from them! The success of the Conference depends on YOU! If you don't share a presentation, who will??

Please go to <http://ists.pls.uni.edu/> - there you'll find the advertisement for the 2010 Conference. Presentation proposals are due by June 1<sup>st</sup> – that deadline

is fast approaching! Talk a colleague into presenting with you! Let others know about the Conference – maybe someone in your building has a great lesson idea, activity, field trip, or class management technique that could be shared with others.

You'll also find information on the three-day Conference: Thursday evening events and opportunities, Friday all day conference, and Saturday morning field trips. I have included an outline of these exciting opportunities below. Mark you calendars now for Oct 7, 8 and 9, 2010!!!

See you there!  
De Anna Tibben

***Fall Conference Preview:  
Changing Iowa Classrooms:  
The One-Room School to One-World Education***

**Thursday, October 7, 2010**

IAS board meeting

Welcome and Conference Kick-Off

Trista Peitzman, IPTV

***“Iowa's One-Room School houses”***

*Iowa's one-room schoolhouses once stood as a hallmark of a simple liberty – an education for all. These days, most remaining rural school buildings stand as a landmark to a simpler time – a safer, more carefree time, when every student lived within walking distance of the schoolhouse, every teacher had more than one grade level to educate, and every parent took a stake in the school's success. During Ms. Peitzman's presentation learn how Iowa's One-Room Schoolhouses came into existence, who taught and attended classes there, the impact they had on their communities, and how the schoolhouses faded into Iowa's history.*

Yvette McCulley, NESTA Regional Director

***“The Galileoscope: More than a Telescope”***

*The Galileoscope is a strategic initiative to improve science, math, and technology literacy worldwide. With this easy to assemble kit, anyone can explore how optics work and then go outside at night to see the celestial wonders first glimpsed by*

*Galileo 400 years ago. Astronomy is an ideal vehicle to interest kids in the basics of chemistry, physics, and biology to elementary and middle-school kids. For high school it's the perfect science since it uses biology, physics, chemistry, geology, and environmental science to study the universe and our place in it. Astronomy is also ideally suited to teaching how observations and evidence can lead to claims about how the world works.*

*Join me for the building of your very own Galileoscope. If weather permits, participants will have the opportunity to use the Galileoscope the evening*

*following assembly. A tripod is not provided and will be necessary to use the Galileoscope. Also, classroom lessons will be provided. Teachers may request additional Galileoscopes for classroom use.*

*The ten-dollar registration fee will pay for a one-year NESTA e-membership.*

Aileen Mahood Sullivan

**“Let the Demo Speak for Itself”**

**An Evening of Chemistry How-To and Pedagogy”**

*This session will focus on the presentation of several common demonstrations highlighting the role of the teacher as a “silent partner” to the students! experience.*

*\*transportation available*

Observatory Experiences

Ames Amateur Astronomers and Galileo (Michael Francis)

**“Iowa’s Skies Tonight”**

*An interactive program in which Galile and members of the Ames Amateur Astronomers club will guide you through the evening skies. In-door program will be presented if weather doesn’t cooperate!*

*\*transportation available*

John Weis, NASA Education Specialist

*View the latest interactive materials from NASA: take a field-trip to the Moon, wander around the rocks of Mars, and learn how you can bring ACTUAL moon rocks to your classroom!*

IAS-ISTS Chair Reception

**Friday, October 8, 2010**

ISTS Fall Conference 8am-4pm

Iowa State Center, Scheman Building Levels 2 & 3, ISU Campus

8am – 4pm

**Saturday, October 9, 2010**

9:00 am – 1:30 pm

**Ames Resource Recovery Plant**

<http://www.cityofames.org/worksweb/ResourceRecovery/default.htm>

*Do you know how much garbage you generate each and every day? Story County residents produce between 3.3 and 3.6 pounds per person per day! Learn what happens to this trash as it journeys from trash can to fuel source.*

## **Martin Marietta Mine**

<http://www.martinmarietta.com/>

*Travel 250 feet below the surface of the Earth to witness first-hand Iowa's richest mineral resource - limestone. Travel back in time to the ancient inland seas that once covered this land called Iowa. Follow the mining process from extraction to production. Gain an appreciation for this mineral resource. You'll never look at gravel roads or concrete highways the same again!*

## **Ada Hayden Park**

<http://www.cityofames.org/ParksRecWeb/AdaHaydenHeritagePark.htm>

*Ada Hayden was born on a farm about two miles north of Ames on August 14, 1884. Hayden's parents owned part of the land that is currently known as the Ames Quarry. The entire area was her childhood "playground". The citizens of Ames approved a bond issue on November 6, 2001, to purchase 437 acres of land surrounding and including an abandoned rock quarry in north Ames. The lakes, which total 1.2 billion gallons of water, serve the community as an emergency water source during drought conditions.*

*As a result, maintaining the quality of the water in Ada Hayden Lake is of great interest to the citizens of Ames. Dr. Bill Simpkins, ISU hydrogeology professor, will lead a short tour through parts of Ada Hayden Park. He will review the history of the lake and park, present some results of water quality research, and discuss watershed development issues that may affect future use of the lake for recreation and water supply.*

*The park includes passive recreation features such as a fishing dock, a ramp for non-motorized boats, three miles of hard surface pathway, two miles of crushed-rock paths, a restroom, parking lot and a pedestrian bridge.*

## **The Life Work of Griffith Buck presented by Mary Buck Reiman Gardens Tour and luncheon**

<http://www.reimangardens.iastate.edu/index.cfm>

*Tour one of the largest public gardens in Iowa. Situated on a 14-acre site, the year-round facility features distinct gardens throughout the indoor and outdoor areas, an indoor conservatory, 2,500-square-foot indoor butterfly wing, butterfly emergence cases, a gift shop, and five supporting greenhouses. Reiman Gardens has many award-winning features, and has recently planted one of the first rose gardens in a public garden that incorporates both sustainable designs, plants, and gardening practices.*

*Guided tours of Reiman Gardens highlight the Christina Reiman Butterfly Wing, Conservatory, Jones Rose Garden, and other areas of the Gardens. Follow trained guides as they show you hundreds of native and tropical butterflies. Watch butterflies emerge from their chrysalides in the emergence cases and enjoy the beautiful tropical conservatory. Do all of this while learning about plant and insect life cycles. Box luncheon served onsite. Each participant will leave with a 4-5" potted Buck Rose.*

# Announcements

- **GLOBE Alert**

**Calling all Iowa GLOBE Teachers -  
- GLOBE Website Update  
Announcement**

A major redesign of GLOBE Website ([www.globe.gov](http://www.globe.gov)) is underway. Currently all of the information on the old site is available through the link to CLASSIC GLOBE. The new website will be easier for students to use with new graphing and mapping capabilities for our database of over 10 million points of student collected data! The new site will highlight more collaborative projects open to all Iowa teachers, students and citizens (like GLOBE at NIGHT). Currently trained teachers can sign up for the NEW GLOBE teacher forums and discuss their projects with GLOBE scientists and educators. So keep checking back to see what's is new. As features such as the data entry pages and maps and graphs are migrated to the new website, these same features may no longer be available in Classic GLOBE.

Please feel free to contact me at any time if you can't find what you are looking for or if you have suggestions for GLOBE. I'm here to help! Marcy Seavey, IAS Program Director, Coordinator GLOBE Iowa ([seavey@uni.edu](mailto:seavey@uni.edu))

- **Iowa Has National Winner**

Disney announced Mrs. Julie Schnedler's sixth grade Mediapolis Community School class as the national grand prize winner of the inaugural Disney's Planet Challenge with their project "Operation: Save the Quail". The winning class was honored in a recognition ceremony and parade at Disneyland, and will be featured on the Disney Channel. Mediapolis students' work to restore quail habitat in Iowa topped thousands of entries in Disney's Planet Challenge. The entire class headed to Disneyland for two days of activities. The class also appeared on "Good Morning America." Visit [www.disney.com/planetchallenge](http://www.disney.com/planetchallenge) for more information. Congratulations!!

- **Nominate a Fellow Teacher**

Calling all US high school science department chairs and administrators: You are invited to nominate teachers for the 2010 AAAS Leadership in Science Education Prize for High School Teachers. The \$1,000 prize honors a high school science teacher who has advanced science education by developing and implementing an effective strategy, activity, or program. For more information, contact Lester Matlock <<mailto:imatlock@aaas.org>> or go to our website for prize details, nomination forms, and application <[http://www.aaas.org/aboutaaas/awards/hs\\_scied\\_leadership/](http://www.aaas.org/aboutaaas/awards/hs_scied_leadership/)>.

## **Opportunities**

### **• National Center for Atmospheric Research**

Are you seeking a K-12 professional development opportunity that will enhance your qualifications, competency, and self-confidence in integrating Earth system science, climate, and global change into your science classroom? The National Center for Atmospheric Research (NCAR) offers a series of six and seven week online courses for middle and high school teachers that combine geoscience content, information about current climate research, easy to implement hands-on activities, and group discussion. The courses run concurrently from June 18 through August 8, 2010.

\* CD 501 Introduction to Earth's Climate is designed to guide participants through the basics of climate science, integrating content, classroom activities, and community-building discussions to help middle and high school educators understand the answers to common questions about climate.

\* CD 502 Earth System Science: A Climate Change Perspective explores Earth as a system from the perspective of climate and global change, describing the interactions between the various parts of the Earth system, including human activities, and how they all affect our climate.

\* CD 503 Understanding Climate Change Today presents some of the current and predicted impacts of global warming on our planet and human societies. This course explores how climate models are developed and used to understand likely scenarios of future climate and how current scientific research is improving the quality of climate predictions.

There is a \$225 fee per course (save \$25 if you register before June 1st.) For complete course schedule and registration information, visit <http://ecourses.ncar.ucar.edu>. For questions or comments, please contact Becca Hatheway at [hatheway@ucar.edu](mailto:hatheway@ucar.edu).

### **• Iowa Mathematics and Science Partnership**

A science teacher at Kemin Industries last summer applied his knowledge of chemistry to the analysis of nutritional additives to animal feed. A Pella teacher helped a major window manufacturer with mixing more durable wood finishes for standing up to the elements. These and other summer opportunities are available this summer too through Real World Externships for Teachers of Math and Science ([www.iowamathscience.org/externships](http://www.iowamathscience.org/externships)). These are paid six-week



summer jobs at industries around the state that have invited teachers into the plant for some authentic applications of the discipline. For example, Kemin again seeks a couple of science teachers to help with screening fungi for mutagenesis properties, or for screening plant extracts for facial creams. The Iowa DNR could use the help of a teacher in conducting an animal census on public lands.

Teachers may help us identify local businesses or industries too, where we can work together to create an externship any where in Iowa. You may access the application at the website previously mentioned. Feel free to contact us for more information at 319-273-2959 or at [imsep@uni.edu](mailto:imsep@uni.edu).

Other recent news at the Iowa Mathematics and Science Education Partnership includes the wildly successful "IMSEP Day" at the Capitol on March 24, showing state legislators the dozens of programs and thousands of talented professionals engaged in mathematics and science education improvement across Iowa. Some of our success stories have been captured as "STEM Gems" - Iowans using math and science successfully in hobbies and careers. Posters of these superstars have been mailed to science and math teachers across Iowa for helping to inspire youth to pursue STEM-related careers.

Finally, partnering with the USA Science and Engineering Festival, we encourage you to read about the inaugural National Lab Day (<http://www.nationallabday.org/>) and also take an early peak at Festival developments at <http://www.usasciencefestival.org/>. As always, we welcome your input as to how the Iowa Mathematics and Science Education Partnership can best help you do your vital work for youth.

Jeff Weld, Director, Iowa Mathematics and Science Education Partnership

- **Iowa to Wyoming Ecology/Geology Workshop**

Experience the spirit of scientific inquiry and the value of outdoor education in this active Wyoming-bound ecological "lithivacation" that carpools from the Midwest! Extensive hiking in varied terrain will be an integral component of the course; canoeing and rafting are offered, as well.

For K-12 teachers

Dates: July 21 - Aug. 2

Cost: \$1250

4 graduate credits through the Colorado School of Mines for \$170

Application deadline: June 1, 2010

For more information and registration, please contact Kathy Megivern at [kathy.megivern@gmail.com](mailto:kathy.megivern@gmail.com) <<mailto:kathy.megivern@gmail.com>>

- **Blank Park Zoo**

The Blank Park Zoo invites educators to a free workshop to be held on the dates and at the locations listed below. The workshop is good for license renewal credit and teachers will be eligible to bring their students to the zoo

and/or schedule a classroom animal program for FREE!!

Workshop Description: Teachers will experience a module created by the Wildlife Conservation Society and used at the Blank Park Zoo. H.E.L.P (Habitat Ecology Learning Program) utilizes art, math, geography and live science to explore ecology. The lessons are designed to motivate students, encourage critical thinking, and make learning math and science fun. This course will specifically focus on animal adaptations and different habitats, with visits from live animals from various ecosystems!

Cost: Free

Included in workshop: Coffee and doughnuts both mornings and lunch on both days, materials for teachers to utilize in their classrooms, and a scholarship that will pay for their field trip to the zoo and/or a classroom visit!

Dates/Locations:

F.W Kent Park near Tiffin, IA  
June 22, 2010 from 9 to 4:30  
June 23, 2010 from 8:30 to 4

Lime Creek Nature Center, Mason City, IA  
August 4, 2010 from 9 to 4:30  
August 5, 2010 from 8:30 to 4

Honey Creek Resort State Park, Moravia, IA  
August 10, 2010 from 9 to 4:30  
August 11, 2010 from 8:30 to 4

Participants should contact Kathy McKee at 515-974-2557 or [kamckee@blankparkzoo.org](mailto:kamckee@blankparkzoo.org) to register for the workshop.

- **IMPACT Workshop**

Openings are still available for this summers **IMPACT workshop** on the UNI Campus (July 18-23 and 26-30) with follow up sessions throughout the 2010-2011 school year. The IMPACT workshop will transform the way you teach and talk about science with your students! Throughout the two weeks you will experience weather forecasting and seasons investigations (GLOBE) for elementary students, you will practice using technology as a tool to gather, store, organize, analyze and communicate about science all while using the 5 essential features of inquiry to plan how you will implement aspects of the two weeks with your own students. IMPACT allows you to integrate technology, science and math in authentic ways. Throughout the following school year you will have the support of the IMPACT team (Dr. Alan Czarnetski - UNI, Marcy Seavey - IAS, Lori Seawell - UNI, Doreen Hayek - UNI) and your fellow workshop participants

as you implement activities in your own classroom. IMPACT will help you meet your Iowa Core Curriculum goals for science (especially science as inquiry, earth science and 21st cent. skills) and the Iowa Teaching Standards. Learn more and register for the workshop here:

[http://www.uni.edu/ietti/impact/about\\_impact/2010\\_impact\\_program.htm](http://www.uni.edu/ietti/impact/about_impact/2010_impact_program.htm)

- **Quarknet Summer Institute**

Quarknet is an internationally renowned program associated with high-energy particle physics experiments. Its goal is to advance the study of particle physics by training and offering unique research experiences to high school teachers and their students. This outreach program trains teachers in the summer at the University of Iowa. The program offers a stipend, lodging, and the possibility for reduced-cost graduate credit in physics. It also offers new approaches to teaching particle physics in the high school classroom including using a telescope that measures cosmic muons.

The summer of 2010 brings us one of the most talked about topics in science today: Cosmology. What is the shape of the universe? When did it start? What evidence do we have for its expansion? What are scientists' ideas on the existence of dark matter, or the theory-altering elusive dark energy? How are high-energy particle physicists working with cosmologists to discover the very fabrics that make up our universe?

The summer institute will be held from July 18th to July 23rd. Go to: <http://www.ptec.org/QuarkNet/QuarkNet.cfm?ID=154>. To apply, contact [clike@bettendorf.k12.ia.us](mailto:clike@bettendorf.k12.ia.us). If you live in the Iowa City area, transportation costs can be substituted for lodging. The institute is open to all science teachers in the state, preferably those teaching physics or astronomy at the high school level or those planning on teaching those subjects.

- **Middle School Opportunities at UNI**

**\*Beginning Robotics Camp\*** - For students currently enrolled in grades 5-8 who have little or no experience with the LEGO NXT robot and Mindstorms programming software.

Location: University of Northern Iowa - Cedar Falls, Iowa. July 5-9, & 12

Contact: Bill Harwood, Coordinator, [bill.harwood@uni.edu](mailto:bill.harwood@uni.edu) or 319.273.2052

**\*Experienced Robotics Camp\*** - For students currently enrolled in grades 5-8 who are already familiar with both the LEGO NXT robot and the LEGO Mindstorms programming software.

Location: University of Northern Iowa - Cedar Falls, Iowa. June 29-July 2

Contact: Bill Harwood, Coordinator, [bill.harwood@uni.edu](mailto:bill.harwood@uni.edu) or 319.273.2052

**\*Middle School Crime Solvers\*** - Students in grades 7-9 will learn how to secure and protect a crime scene, collect evidence, study evidence using the latest technology and put it all together to solve a crime.

Location: University of Northern Iowa - Cedar Falls, Iowa. July 12-16

Contact: Bill Harwood, Coordinator, [bill.harwood@uni.edu](mailto:bill.harwood@uni.edu) or 319.273.2052

- **Siemens We Can Change the World Challenge**

The Siemens We Can Change the World Challenge gives students the opportunity, tools and inspiration to become those agents of change. Beginning August 17, 2010 through March 15, 2011, high school student teams from across the country will be challenged to create sustainable, reproducible energy-related environmental improvements that can be replicated by or impact others beyond their local community. In keeping with the Challenge's overall mission to build a more sustainable world, high school participants (grades 9-12) are encouraged to form teams of up to four students, research an energy related issue using scientific investigation, and create a replicable solution using web-based curriculum tools powered by Discovery Education. Student teams, with a teacher or adult advisor can register for the Siemens We Can Change the World Challenge at [www.wecanchange.com](http://www.wecanchange.com).

- **Mini-Sumo Robotics Camp**

June 21-July 2, 2010, 9 a.m.-Noon and 1:30-3 p.m.

Ages: High school students, preference given to high school juniors or seniors in fall 2010.

Cost: \$250 Enrollment Limit: 18

Location: Room 214, Begeman Hall, UNI

Students will construct mini-Sumo robots and will be taught basic wiring, programming, and how to use electromechanical sensors. The two-week camp will allow each student the time to construct and personalize his or her own robot-theirs to take home at the end of camp. The last day of class will be devoted to a public mini-Sumo competition, a fun and exciting event for all- and a chance for students to show off their mini-Sumo robots. Website for more information:

[www.uni.edu/camps/sciencecamp/minisumo.shtml](http://www.uni.edu/camps/sciencecamp/minisumo.shtml)

- **Summer Podcast Competition**

Society for Science & the Public (SSP) announces a national student podcast contest to celebrate and inspire students to learn science over the summer!

With podcasts, blogs, online social networks, and websites taking social and educational settings by storm, Society for Science & the Public is challenging students to take science up a notch this summer. Speaking of Science uses a

fun, innovative online medium that allows students to express their opinions and creativity on science topics in a technological way. SSP invites students in grades 6-12 to enter a podcast contest showcasing what they learned from reading about science in the SSP publication *Science News* magazine or SSP's online resource *Science News for Kids*. For more information go to:

<http://www.societyforscience.org/Page.aspx?pid=538>.

## • **New Science Teacher Academy**

If you're a second or third year, secondary science teacher, don't miss the deadline, May 30, to apply to the NSTA New Science Teacher Academy, cofounded by the Amgen Foundation <http://www.nsta.org/academy/>. If selected, this Academy supports Fellows through mentoring and other professional development resources during their initial, challenging years. Striving for quality science teaching, enhanced teacher confidence, classroom excellence and solid content knowledge, the Academy provides the following additional benefits.

- \* Full membership to the National Science Teachers Association
- \* Access to the web-based Learning Center's tools and professional development activities and resources including web seminars led by national experts
- \* Use of vetted science websites, state and national standards sites, other professional organizations, safety tips, and more
- \* E-mentoring with an experienced teacher in the same science discipline and grade band
- \* Facilitated online curriculum devoted to science content and applicable classroom pedagogy
- \* Access to a nationwide, online network of science educators and scientists for exchange of information, ideas, and resources
- \* Participation in specialized conference pathway sessions, and a Research Dissemination Conference or a Professional Development Institute.
- \* Paid accommodations, airfare, meals, and registration fees to attend the NSTA National Conference on Science Education.

Who is Eligible?

- \* Applicants must reside in the United States
- \* Applicants must be entering their second or third year of teaching
- \* Applicants must be working a schedule with 51 percent of their classes in middle or high school science

## • **SATELLITES Summer institute**

July 12-16, 2010 at the University of Toledo.

SUMMER TEACHER INSTITUTE "SATELLITES" (Students And Teachers Exploring Local Landscapes to Interpret The Earth from Space) will focus on

geospatial technology and climate change with some alternative energy. We are offering a Teacher Institute this summer on Geospatial Technologies (Remote Sensing, GIS, GPS).!

FOR TEACHERS: Grades 5-12!

TOPICS COVERED INCLUDE: An overview of remote sensing! cloud identification, atmosphere & energy budget! training in GLOBE surface temperature protocol! an introduction to Global Positioning Systems (GPS)! an introduction to Geographic Information Science (GIS)! inquiry-based investigations & projects! and other remote sensing topics.

ALL PARTICIPANTS RECEIVE: Free lunches! FREE Infrared Thermometer (IRT) instrument (valued at ~\$225)! FREE Global Positioning System (GPS) (valued at ~\$125)! GLOBE certification in cloud, snow, surface temperature protocols! Many other complimentary support materials

More information is available at: <http://satellitesk12.org/>!

If you want to attend, please send your name, home address, home phone, school district, school name, school address, school phone, grade(s) teaching, subject(s) teaching as soon as possible to me, Mikell Lynne Hedley at: [mikell.hedley@utoledo.edu](mailto:mikell.hedley@utoledo.edu).

REQUIREMENTS INCLUDE: Attending the 5 day seminar and completing all activities during the institute! assisting students to participate in a GLOBE inquiry-based investigation through a specified local field campaign (data collection and data entry)! assisting your students in an inquiry-based research project (inquiry-based project will be modeled at the institute)! attendance at annual Conference in April 2011 to present students' inquiry-based research project! fill out all pre and post questionnaires, plus evaluations during the institute.

## • Academies Creating Teacher Scientists

DOE Academies Creating Teacher Scientists (ACTS)\*

Now accepting applications for Cohort 6 (2010-2012)

See: <http://ed.fnal.gov/acts>

Fermilab is offering a limited number of positions for teachers of grades 5-9 in its DOE ACTS cohort starting in the summer of 2010. Participants will meet at Fermilab for four weeks each summer for three years. During the academic year following each summer, as participants implement their summer work in their schools and work on small projects, they will be supported by program staff and by each other, primarily through online meetings, with one or two face-to-face meetings as well.

In DOE ACTS, participants will have research experiences, increase their

understandings of engaged and inquiry learning, and continually further their leadership capabilities.

Participants will receive an \$800/week stipend for their summer work. Non-local participants will also receive housing and travel. All participants will be eligible for grants to support classroom equipment purchases and travel to professional development conferences.

- **Modeling Workshops**

Modeling Workshops in high school physics, chemistry, and physical science will be held in summer 2010 in 24 states. Visit "Modeling Workshops Nationwide in Summer 2010," [http://modeling.asu.edu/MW\\_nation.html](http://modeling.asu.edu/MW_nation.html).

Modeling Workshops are peer-led. Modeling Instruction is one of two K-12 science programs designated by the U.S. Department of Education as EXEMPLARY. Stipends are provided at most sites, usually for in-state teachers. Graduate credit is available at some sites.

"It was, without a doubt, the single greatest professional development experience of my career." – typical teacher comment <http://modeling.asu.edu/>

- **Air Science Film Available**

AIR: The SEARCH FOR ONE CLEAN BREATH inspires viewers to protect this precious natural resource. Tony Award-winning actor Joe Mantegna narrates this film biography of air # the invisible character essential to all life. With state-of-the art animation and live action, take a guided tour of the story of air. Meet renowned scientists and scholars worldwide who are discovering the mysteries of air. From the beginning of time to the present, this voyage will take you to an 18th century British laboratory, the island nation of Iceland, and to a deserted steel mill in the Utah desert.

This 41-minute film was created by Ventura County Air Pollution Control District, Ventura, California under cooperative agreement with The United States Environmental Protection Agency. Additional support was provided by Dubscape, Inc., Loma Linda University Medical Center, Media 360, and the Port of Long Beach, California.

**The middle school and high school classroom guide for is now available online for free download at: <http://www.vcapcd.org/AirTheFilm/teacher.htm>.**

Each of the nine lessons can be taught as a stand-alone lesson, altogether, and with the DVD. Lessons include: Air Pollution Tragedy # A Case Study; Analyzing Energy; Carbon Dioxide in Ice Core Samples; Commuter Match & Math; Effects of Global Warming; Navigating Opinion in Search of Factors; Our Energy Diet, Where Does Our Pollution Go?; and Taking Action.

You may check out this DVD by mail in either regular high definition or Blu-Ray Disc format from the DNR Air Quality Bureau for one to two weeks. Contact Mindy Kralicek, Air Quality Information Specialist, at (515) 281-7832 or



[Mindy.Kralicek@dnr.iowa.gov](mailto:Mindy.Kralicek@dnr.iowa.gov). Each of the DNR Environmental Service Division Field Offices also has a copy to lend if you prefer to check this out locally. Go to <http://www.iowadnr.gov/contact.html> to see contact information for the field

## • **Biotechnology Through the Ages**

Iowa Lakes Community College will be holding a NSF "Biotechnology through the Ages" Summer Conference June 21-23, 2010 in Emmetsburg, Iowa!! We will be offering \$100/day stipends, paid hotel rooms, and mileage reimbursement so please spread the word!!! **MUST BE REGISTERED BY JUNE 1 TO TAKE ADVANTAGE OF THESE GREAT DEALS!!** If you need a room, please contact Teresa ASAP!

This year we are focusing on a lot of hands-on material and labs to incorporate into classrooms!! We will also be taking charters to Iowa State University for some sessions!! Registration is NOW posted online!! Log onto [www.iowalakes.edu/nsfbiotech](http://www.iowalakes.edu/nsfbiotech) to register and see a copy of the "draft schedule". Teresa Tonderum will send out a confirmation to those that are registered.

June 23 and 24, 2010: What about additional sessions on Wednesday and Thursday? We are hosting an additional 1 and \$ days of sessions for *science instructors* who may be interested in extending the conference...

There's been additional interest in sharing lab integration and equipment experiences for science teachers who are able to extend their participation to stay the 24<sup>th</sup>. (Stipend and lodging still provided!) **Classroom equipment** is also available for those who are able to stay! Be sure to register for this while registering for the conference!! More details will be posted later!

Here is a sneak peak to some session topics for this year's conference:

- ~ Steve Pelzer – "Brewing Beer"
- ~Kevin Fehr – "Apple Cider"
- ~Dr. Robert Klepper- "Stem Cell Research"
- ~Ashley Wolfe- "Practical Agriscience Ideas for Hands-on Lab Instruction"
- ~Ramona Anand- "Pace Maker and Other Labs"
- ~Misty Gish- "Using Immunoassay Methods to Test for Genetic Modifications in Crops"
- ~Greg Petersen- "The Art of Science: Practical Experience for the Laboratory"
- ~Julie Clark- "1,2,3 On Setting Up Labs in the Classroom"
- ~Neal Williamsen- "Identity Testing"
- ~Iowa State sessions:
  - ~Mike Zeller and Gary Polk- "PCR Basics"
  - ~ Mike Zeller- "K-casein Gene in Dairy Cattle"
  - ~Mike Zeller- "CSI-DNA Fingerprinting"
  - ~ Terri Boylston- "Curds & Whey- An Investigation into Cheese &Tofu Processing"
  - ~Dale Gruis- "Jet-Puffed Genetics"



## **News**

### • **A New Life For SciJinks!**

**A New Life for SciJinks!** If you think you've seen the SciJinks Weather Laboratory at [SciJinks.gov](http://SciJinks.gov), look again. It's got a whole new persona to make its exciting content, games and multimedia more accessible than ever. SciJinks still has its Picture and Cool Fact of the day. It has "Wild Weather Adventure," "Bad Weather Joke Machine," and other fun and games. SciJinks explains the reasons for the seasons, the tides, and other mysteries in colorful "now I get it!" pages. There are more images than ever and now videos too, and lots of help for teachers. Looking for information on hurricanes? SciJinks also shows you its content by topic: clouds, tides, oceans, atmosphere, seasons, satellites—you name it. Visit or revisit [SciJinks.gov](http://SciJinks.gov) and discover the treasures you missed before.

### • **Space Place News (Change this one.....)**

The latest issue of the Space Place Newsletter: News and Notes for Formal and Informal Educators has just been published. The newsletter is all about the many useful and--it goes without saying--free resources on the Space Place website that can be helpful for kids and grown-ups interested learning about science, technology, and space. The newsletter may be downloaded from <http://spaceplace.nasa.gov/en/educators>.

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## **Your ISTS Leadership:**

### **Iowa Academy of Science Mission:**

- **Promote scientific research and its dissemination**
- **Improve instruction in the sciences**
- **Promote public understanding of science**
- **Recognize excellence in science and science teaching**

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 [kathy.megivern@gmail.com](mailto:kathy.megivern@gmail.com) 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? Zing a line at [nweirather@central-lee.k12.ia.us](mailto:nweirather@central-lee.k12.ia.us) or [kathy.megivern@gmail.com](mailto:kathy.megivern@gmail.com).