



SCIENCE BYTES

FEBRUARY 20, 2008 VOLUME 10

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Teaching Ambassador Fellowships

Secretary Spellings has announced the creation of Teaching Ambassador Fellowship positions for currently practicing, K-12 public school teachers at the U.S. Department of Education for the 2008-2009 school year. These positions will offer highly motivated, innovative teachers the opportunity to contribute their knowledge and experience to the national dialogue on public education. The Fellowship includes two kinds of opportunities for teachers across the U.S. Up to 20 Classroom Fellows will remain at their schools under their regular teaching contracts and will be paid to participate in additional Department discussions and projects throughout the school year on a part-time basis. Up to five Washington Fellows will be chosen to become full-time, paid federal employees in Washington, D.C. for the school year, working on education programs and participating in policy discussions.

Teaching Ambassador Fellows will be selected based upon their record of leadership, impact on student achievement, and potential for contribution to the field. Highly qualified K-12 public school teachers who have

spent at least three years in the classroom are eligible to apply. Teachers must be currently practicing in and employed by a public school district to be eligible. To ensure collaboration at the school and district levels, teacher applicants must have the full support of their school principals.

Applications are due by April 7, 2008. Teaching Ambassador Fellows will be named by early summer for the 2008-2009 school year.

Please read the detailed information found at <http://www.ed.gov/programs/teacherfellowship> to learn more. Be sure to click on all of the links to review the following:

Program Overview

(<http://www.ed.gov/programs/teacherfellowship/programoverview.html>)

Eligibility

(<http://www.ed.gov/programs/teacherfellowship/eligibility.html>)

Applicant Info

(<http://www.ed.gov/programs/teacherfellowship/applicant.html>)

Application Instructions

(<http://www.ed.gov/programs/teacherfellowship/applicationinstructions.html>)

FAQs

(<http://www.ed.gov/programs/teacherfellowship/faq.html>)

Flinn Scientific Middle School Activities

Add these free February lab ideas from Flinn Scientific to your collection of “must do” middle school science activities.

Use the earth science activity, “Stalactites and Stalagmites,” to help your students understand how these cave formations grow. It takes thousands of years for real stalactites and stalagmites to form and grow, but your students can grow their own in miniature in just a few weeks.

This month’s physical science activity, “Diving Eggs,” is so astounding you may want to capture it on video—your students will beg to see it again! Three very breakable raw eggs, balanced precariously on cardboard tubes above three water-filled glasses, can be dropped simultaneously into the water—and you can do it without touching the eggs! It’s more than just an amazing trick—it’s an unforgettable demonstration of Newton’s first law of motion.

You can continue to receive these free activities every month—simply order from Flinn! You’ll be delighted by Flinn’s outstanding service, just like this middle school teacher:

“I used Flinn for the first time and I am impressed. Your catalog is a “bible” for the science teacher—the safety information is invaluable. I placed an order and have never had such excellent service from any other company.”

—Marie Wilkinson, Rolling Hills Middle School, CA

To print “Stalactites and Stalagmites” and “Div-ing Eggs” please go to:
http://www.flinnsci.com/Sections/MS/Activities/MS_act.asp

FREE

The federal government offers a treasure trove of teaching and learning resources. Where can you find them?

FREE (<http://www.free.ed.gov>).

FREE organizes more than 1,500 lesson plans, primary documents, science animations, math challenges, and works of art, literature, and music from the Library of Congress, Smithsonian Institution, National Archives, National Science Foundation, NASA, National Institutes of Health, National Gallery of Art, National Endowment for the Humanities, National Park Service, U.S. Geological Survey, National Oceanic and Atmospheric Administration, and other federal agencies.

See resources by subject

(<http://www.free.ed.gov/sitemap.cfm>) or topic

(<http://www.free.ed.gov/sitemap.cfm?page=alpha>).

Teachers' Domain

<<http://www.teachersdomain.org>> It's International Polar Year! Teachers' Domain is pleased to announce our new Polar Sciences Special Collection

<<http://www.teachersdomain.org/exhibits/ipy07-ex/index.html>>, which is funded by the National Science Foundation, and offers 20 new resources about the Arctic and the Antarctic, plus resources from our existing collections, a lesson plan, and our newest feature, a student activity.

The Earth's polar regions may seem remote, but they are an integral part of the entire Earth system. Pollution from other areas affects Arctic and Antarctic ecosystems, and changes in the icy landscapes of the polar regions may influence global ocean circulation patterns and accelerate climate change.

Howard University Teacher Training

Are you ready to influence the lives of hundreds of young people?

Are you ready to make a difference in your community?
Are you 'Ready to Teach'?

Howard University has just been awarded a multi-million dollar grant from the U.S. Department of Education to recruit, train and certify people that are interested in becoming teachers. We are looking for candidates who would like to teach English, Mathematics, Reading, Science or Special Education in Chicago (IL); Clayton County (GA); Houston (TX); Prince George's County (MD); or Washington (DC). The best part -no experience or background in education is required!

The Ready to Teach program (RtT) is ACTIVELY recruiting candidates for the 2008-2009 Cohort. Through this program you can earn a Master's of Arts in teaching Degree and get your teaching certification in one short year! RtT even provides scholarships and financial assistance to its candidates. The program is geared towards African-American males, but everyone is encouraged to apply.

Hurry, the application deadline is March 3, 2008!!! For admissions requirements and more information please visit the website at www.readytoteach.org <<http://www.readytoteach.org/>>, or feel free to contact me Trenile Tillman at ttillman@howard.edu. Please forward this information to your friends, family, colleagues, children, etc.--

Best Regards,

Trenile Tillman Program Assistant

Howard University School of Education

Ready to Teach Program

202-806-6500 (phone)

202-518-1166 (fax)

Research Experiences for Teachers

Research Experiences for Teachers (RET) application process for summer 2008 is open until March 14th. The link to the application can be found at <http://www.magnet.fsu.edu/education/ret/> <<http://www.magnet.fsu.edu/education/ret/>>.

The RET program dates this year are June 9th – July 18th. The program pays teachers a \$3600 stipend and also covers their travel and housing while they are in the program. If you have any questions about the program or application please contact me.

Jose A. Sanchez, Assistant Director

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NASA Opportunities

SPHERE: Students as Professionals Helping Educators Research the Earth Feb. 29, 2008

SPHERE is an eight-week Earth System Science education and research program at Christopher Newport University and NASA's Langley Research Center. To apply, students must attend an accredited U.S. college or university and must be at least rising sophomores with majors in sciences, engineering or mathematics. Chosen students will work in small teams with university mentors and NASA scientists on cutting-edge research projects linked to ongoing missions.

A competitive stipend will be paid along with one for meals. For students from outside the area, housing will be provided in CNU dorms at no extra cost, along with travel assistance. Students from minority-serving institutions and from historically under-represented groups are especially encouraged to apply.

Applications are due Feb. 29, 2008. For more information, visit <http://sphere.pcs.cnu.edu/>. Please e-mail questions about this opportunity to Dr. S. Raj Chaudhury at schaudhury@cnu.edu.

MUST Scholarships -- DEADLINE EXTENDED March 1, 2008

The Motivating Undergraduates in Science and Technology Project, funded by NASA, is a joint partnership between the Hispanic College Fund, the United Negro College Fund Special Programs and the Society for Hispanic Professional Engineers.

MUST awards scholarships and internships to undergraduate students pursuing degrees in science, technology, engineering and mathematics, also known as STEM fields. The MUST Project is open to all undergraduate students and is particularly focused on engaging students from underserved and underrepresented groups to enter STEM fields.

Each year, the MUST Project supports approximately 100 undergraduate students with a one-year competitive scholarship of up to one-half of tuition, not to exceed \$10,000. Students who maintain the required minimum grade point average will be eligible for a paid internship at a NASA center or other research facility. Additionally, students will benefit year-round from tutoring, lecture series and mentoring from STEM faculty and peers.

The application period closes on March 1, 2008. For more information, visit

http://www.nasa.gov/audience/forstudents/postsecondary/programs/Motivating_Undergraduates_Science_Technology.html

NASA Planetary Biology Internship March 3, 2008

The NASA Planetary Biology Internship Program provides opportunities each year for nine or 10 interns to undertake research at NASA research centers, NASA-sponsored laboratories, and academic institutions. The pursuit of such studies is expected to broaden the base of this new science by encouraging people in many different fields to take part.

Students accepted in the PBI program will be expected to carry out research with a NASA-sponsored investigator for eight weeks, usually during the summer months. Typical programs in which interns may become involved include: global ecology and remote sensing; microbial ecology and bio-mineralization; advanced life support; and origin and early evolution of life.

Applications are due March 3, 2008. For more information, visit http://www.mbl.edu/education/courses/other_programs/pbi.html. Please e-mail questions about this opportunity to Michael Dolan at pbi@geo.umass.edu <<mailto:pbi@bio.umass.edu>> .

Are You Interested in Hosting a Live In-flight Education Downlink With ISS Crewmembers? Proposal due March 19, 2008

NASA is seeking formal and informal education institutions and organizations, individually or working together, to host live in-flight education downlinks during Expedition 17 (tentative dates are April 2008 through October 2008). The deadline to submit a proposal is March 19, 2008.

Downlinks are approximately 20 minutes in length and allow students and educators to interact with crewmembers on-board the space station through a question and answer session. A downlink is essentially a modified videoconference in which participants hear and see the crewmembers live from space. The crew does not see the audience. Downlinks afford education audiences the opportunity to learn first-hand from space explorers what it is like to live and work in space. These events are broadcast live on NASA TV.

Members of the U.S. informal and formal education communities are eligible to host these downlinks. Examples include museums and science centers, local

school districts, national and regional education organizations, and local, state and U.S. government agencies. NASA provides this opportunity at no cost to the host organization. For questions, please contact Rene Flores at rene.flores-1@nasa.gov 281-483-0493.

These unique educational opportunities are made available through NASA Education's Teaching From Space Office.

IGES 2008 Announces Thacher Scholars Award Entries due April 4, 2008

In an effort to engage the next generation of Earth scientists, the Institute for Global Environmental Strategies (IGES) is now accepting entries for the 2008 Thacher Scholars Award, to be given to secondary school students demonstrating the best use of geospatial tools or data to study our home planet.

Eligible tools and data include satellite remote sensing, aerial photography, geographic information systems (GIS), and the Global Positioning System (GPS). Entries can be submitted by individuals or teams, either by hard copy or by emailed PDF.

For more information on the Thacher Scholars Award including contest rules, judging rubrics, questions to help guide student projects, and a list of related resources, please visit

<http://www.strategies.org/ThacherScholars>

MY NASA DATA Summer Workshop 2008 Application due April 9, 2008

NASA Langley Research Center, located in Hampton, VA, will host a hands-on workshop designed for the grade 6-12 educator, June 22-27, 2008. The workshop will focus on the implementation of Earth System Science data sets developed for the pre-college education community as part of the MY NASA DATA program. A major component of the workshop will be the development of lessons incorporating one or more data sets. The data sets are derived from the archive of remotely sensed data retrieved from NASA's Earth Observing System satellites. Participating teachers will explore topics in Earth system science (especially atmospheric science), educational application of data sets, and hands-on classroom activities. Participants will experience meaningful field trips, benefit from the expertise of nationally recognized atmospheric researchers, and explore how data sets can be used to enhance their curriculum. Participant feedback and curricular contributions will be enlisted as further development of data sets continues. Earth Science educators are particularly encouraged to apply.

Note: Many of the workshop activities and field trips require walking in hot humid weather. Please consider this when applying to the workshop. Application must be postmarked by April 9, 2008. Additional information may be found at <http://mynasadata.larc.nasa.gov/>

We the People: Picturing America Program Application Due April 15, 2008

The National Endowment for the Humanities (NEH) and the American Library Association (ALA) present a new initiative called Picturing America, part of NEH's We the People program.

Public, private, parochial, and charter schools and home school consortia (K-12) and public libraries in the United States and its territories are invited to apply for a set of 20 laminated posters (approximately 24" x 36") with reproductions on each side. A teacher's resource book is included with the poster set. Additional educational resources will be available on the NEH Web site.

Successful applicants receive a set of 20 laminated posters printed on both sides with artwork. A teacher's resource book is included with the poster set.

Full Details at:

<http://www.neh.gov/PicturingAmerica/index.html>

INSPIRE - NASA Launches New Student Program!

INSPIRE, Interdisciplinary National Science Program Incorporating Research and Education Experience, provides students from the 9th grade through the freshman year of college with on-line resources; NASA related activities and educational modules; and participation in video teleconferences with the centers.

There are opportunities to participate in various experiences such as a one-day VIP tour and workshop at a center for rising 9th graders and a parent/ guardian. Transportation, lodging and meals are provided. Special opportunities include:

A two-week collegiate experience at participating college or university for rising 10th graders.

An eight-week paid internship at a center for rising 11th graders. All transportation, meals, lodging, and chaperones are provided. Students will participate in structured after work and weekend educational and cultural activities.

An eight-week paid internship at a center after high school graduation (high school seniors).

For more information and applications visit:

http://www.nasa.gov/audience/forstudents/postsecondary/programs/INSPIRE_Project.html

Teacher to Ranger to Teacher Program seeks Applicants

National parks enrich the lives of many in this nation. They provide access to the powerful ideas, values, and meanings associated with the remarkable cultural, natural, and recreational heritage of the United States. The National Park Service (NPS) strives to provide opportunities for all Americans to connect to their national heritage through the national parks. However, these opportunities are lacking for some - often due to a variety of social and economic factors.

The Teacher to Ranger to Teacher (TRT) Program offers a solution by linking National Park units with teachers from low income school districts. Under this program, selected teachers spend the summer working as park rangers, often living in the park. They perform various duties depending on their interests and the needs of the park, including developing and presenting interpretive programs for the general public, staffing the visitor center desk, developing curriculum-based materials for the park, or taking on special projects.

Then, during the school year, these teacher-rangers bring the parks into the classroom by developing and presenting curriculum-based lesson plans that draw on their summer's experience. In April, during National Park Week, teacher-rangers wear their NPS uniforms to school, discuss their summer as a park ranger, and engage students and other teachers in activities that relate to America's national parks.

For additional information about the Teacher Ranger program go to <http://www.nps.gov/wupa/forteachers/trt.htm>.

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Summer Science - Physics

Please find below information about our free science camps for international teachers and students.

The **EinsteinPlus Teacher Workshop** is a one-week, intensive residential workshop for international high school teachers that focuses on key areas of modern physics — including quantum physics, special and general relativity, and cosmology. It also incorporates sessions on innovative teaching strategies suitable for all areas of physics.

The **International Summer School for Young Physicists (ISSYP)** is an exciting and challenging two-week program for Canadian students in Grade 11 (or secondaire V in Quebec) and international students ages 16 and 17. The program explores the most fascinating ideas theoretical physics has to offer — from the weird quantum world of atoms and subatomic particles to black holes, warped spacetime, and the expanding universe.

Respectfully,
John Matlock <contact@perimeterinstitute.ca>
Director of External Relations and Outreach
About Perimeter Institute

Canada's **Perimeter Institute for Theoretical Physics** is an independent, non-profit, scientific research and educational outreach organization where international scientists cluster to push the limits of our understanding of physical laws and calculate new ideas about the very essence of space, time, matter and information. The award-winning research centre provides a multi-disciplinary environment to foster research in areas of Cosmology, Particle Physics, Quantum Foundations, Quantum Gravity, Quantum Information, Superstring Theory and related areas. The Institute, located in Waterloo, Ontario, also provides a wide array of educational outreach activities for students, teachers and members of the general public across the country and beyond in order to share the joy of scientific research, discovery and innovation. The activities are supported through a successful public-private partnership involving generous philanthropists and the Governments of Canada and Ontario.
