



SCIENCE BYTES

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Toshiba/NSTA ExploraVision Awards Program

The Toshiba/NSTA ExploraVision Awards Program is calling young scientists to enter its 2008 challenge. Now in its 16th season, ExploraVision will award up to \$240,000 in Savings Bonds this year, along with a host of other prizes, to student team members for the most innovative ideas that project technology 20 years into the future. The program is open to all K-12 public, private, and home-school students of all ability and skill levels who enter under the direction of their teacher. Many teachers now include it as part of their overall science curriculum, citing ExploraVision's propensity toward enhancing student learning and interest in science and cross-

curricular activities. Entries are being accepted now through January 29, 2008. Visit <http://www.exploravision.org/bap> to download your Awards entry kit and competition rules and gain access to participation tips, sample projects, and other resources! Or contact NSTA for information and an application at 1-800-EXPLOR-9 or exploravision@nsta.org. ExploraVision can be the beginning of a lifelong adventure in science. Engage your students in ExploraVision now!

Free New Middle School Curriculum Supplement from the NIH: The Science of Healthy Behaviors

The National Institutes of Health (NIH), part of the Department of Health and Human Services, is releasing The Science of Healthy Behaviors, the newest in a popular series of curriculum supplements available for FREE to teachers in grades K-12. The Science of Healthy Behaviors, for use by middle school teachers, introduces students to the scientific study of behavior and helps them explore how behavioral and social factors influence health. The supplement is a self-contained teacher-ready guide to eight days of guided-inquiry science lessons that explore how behavioral and social factors influence health. This useful tool includes background information, lesson plans, take-home materials, and a Web-based component. Students build their scientific reasoning and critical thinking skills while investigating how research results help us understand disease.

The Science of Healthy Behaviors is: A comprehensive, interactive, and easily incorporated resource. Consistent with the National Science Education Standards. Aligned to state standards for science, math, English language arts, and health. Developed by leading scientists and educators.

The NIH--the primary federal agency for conducting and supporting medical and health research--is distributing this supplement as part of a series fostering interdisciplinary learning and student interest and achievement in science. Within the NIH, the development of the supplement was supported by the Office of Science Education, the Office of Behavioral and Social Sciences Research, and the National Institute of Nursing Research.

To request The Science of Healthy Behaviors or learn about other free supplements in the series, visit <http://science.education.nih.gov/supplements>. Or contact David Vannier, Office of Science Education, National Institutes of Health, Tel: 301-496-8741 or email him at vannierd@od.nih.gov

Apply Now for a Toyota Tapestry Grant

Winning the Toyota TAPESTRY grant was the highlight of my professional life,” said a recipient of the award. The new Toyota TAPESTRY 2008 online application is now available! For 2008 Toyota will be awarding 75-82 grants totaling \$550,000 to teachers who would like to implement an innovative science project in physical science, environmental science or integrating literacy & science. The program is open to middle and high school science teachers and elementary teachers who teach some science in the classroom. Please visit <http://www.nsta.org/programs/tapestry> for complete details on the grant program and the link so you may begin your proposal. Remember that all 50 large grant awardees receive an all-expenses paid trip to the 2008 NSTA National Conference on Science Education in Boston! The deadline for applications is January 29, 2008.

Apply now for the 2008-09 Albert Einstein Distinguished Educator Fellowship Program Attention K-12 teachers: Are you an experienced educator who is ready to make a difference on a national scale? If so, consider applying for an Albert Einstein Distinguished Educator Fellowship and prepare for a year of unique opportunities. As an Einstein Fellow you will spend a school year in Washington, DC sharing your expertise with policy makers. You may serve your Fellowship with Congress or one of several government agencies such as the Department of Energy, NASA, the National Science Foundation, the National Institutes of Health, the National Oceanic and Atmospheric Administration, or the National Institute of Standards and Technology.

The goal of the Einstein Fellows program is to provide an opportunity for teachers to inform national policy and improve communication between the K-12 STEM education community and national leaders. Selection is based on excellence in K-12 mathematics, science, or technology teaching; demonstrated leadership; an understanding of national, state, and local education policy; and communication and interpersonal skills. The Fellowship program was created in 1990 with support from the MacArthur Foundation. Congress formalized the program in 1994 by passing the Albert Einstein Distinguished Educator Fellowship Act. The Triangle Coalition administers the program under the direction of the Department of Energy. The online application opens October 1, 2007 - the deadline date for all applications is January 13, 2008. Apply online at <https://applicationlink.labworks.org/applicationlink/default.htm>

For more information about the Einstein Fellows program visit <http://www.trianglecoalition.org/ein.htm> or contact Liz Burck at burckl@triangle-coalition.org or (703) 516-5963.

Senior Director of Education Programs

The National Environmental Education Foundation (NEEF) is seeking a dynamic, creative, highly motivated professional to build NEEF's capacity to work with the formal school sector nationwide and help us launch a major initiative to infuse environmental education into high school curricula. This position, Senior Director, Education Programs, offers an opportunity to play a leadership role in environmental education and work with the latest communication technologies to interact with students and teachers and actively engage them in the design of our newest program.

National Environmental Education Week is a program of the National Environmental Education Foundation (NEEF). Chartered by Congress in 1990, NEEF is a private, nonprofit organization dedicated to advancing environmental education in its many forms. We aspire to build a nationwide environmentally literate community that cares for and protects the environment at home, at work, and in its communities. See <http://www.neefusa.org/>.

Responsibilities:

- Partnering with environmental education and youth groups
- Recruiting and managing a national advisory committee of teachers, students and environmental education experts
- Developing content for two websites
- Designing and running high school challenge grants
- Developing a program evaluation plan
- Supervising staff and consultants
- Building a strong collaboration with The Weather Channel, national sponsor of the high school program

Qualifications: The ideal candidate will have:

- Experience with high schools students (classroom teaching highly preferred)
- Several years experience managing complex programs on short time frames with multiple partners
- Proven track record developing innovative education programs and public-private partnerships
- Experience in the latest web and internet communication strategies
- Knowledge of high school education issues and understanding of federal and state education policies desirable
- Excellent interpersonal, written and verbal skills as well as a sense of humor are essential

Masters degree in related field and a minimum of five years teaching or program management experience preferred. Bachelor's degree, plus significant relevant experience may substitute.

Skill Requirements:

Working knowledge of QuickBooks accounting software, as well as knowledge of the MS Office Suite.

Knowledge of formal accounting principles, procedures and cycle required.

Excellent written and oral communications skills required.

Compensation: The salary is commensurate with your experience and the Foundation has competitive benefits.

To apply: Please send resume and cover letter to:

Director of Administration, 4301 Connecticut Avenue, NW, Suite 160, Washington, DC 20008 Please include your salary requirements in the cover letter.

Additional contact information:

imbergamo@neefusa.org or Fax to 202-261-6464.

NSTA National Conference on Science Education – Boston – March 27-29, 2008 Professional Development Opportunities

NSTA Research Dissemination Conference

Science Assessment: Research and Practical Approaches for Grades 3–12 Teachers and School and District Administrators

In response to the current interest in science assessment strategies in grades 3–12 classrooms, NSTA presents the **Science Assessment: Research and Practical Approaches** conference on Saturday, March 29, 2008 in conjunction with the NSTA Boston National Conference on Science Education. Assessments play key roles in learning how to learn; understanding the cognitive frameworks and thinking patterns of students; measuring progress in relationship to curricular goals; and communicating to parents, the community, and other stakeholders information about program effectiveness and student accomplishments.

The **Science Assessment: Research and Practical Approaches** conference is designed to familiarize practitioners with current National Science Foundation–funded research on the multiple forms, roles, and contexts for student assessment in science. This research develops and tests new assessment strategies, studies assessments that can inform classroom practice, explores students' understanding and misconceptions, and investigates assessment formats that can serve as accountability measures in high-stakes tests. The overall objective of the daylong event is to allow teachers, administrators at school and district

levels, as well as professional development providers, to learn about the implications of NSF-funded researchers' work for classroom practice and professional development.

According to Rowena Douglas, NSTA's Assistant Executive Director for Professional Development, "This is the continuation of NSTA Research Dissemination Conferences (RDCs) highlighting research topics and our expanding commitment to bring specific, meaningful, and practical professional development to science educators. These highly focused, and timely single-topic events are an important part of our continuing emphasis on topics of current interest in the education community. They complement NSTA Professional Development Institutes (PDIs), currently being offered on Wednesday, March 26, in Boston."

The cost of the science assessment conference is \$295*. For complete descriptions of the plenary and breakout sessions, and to register, visit www.nsta.org/conferences.

Districts are encouraged to send a team of educators. To inquire about a group discount (\$295 first registrant; \$245 each additional), contact Alex Early at aearly@nsta.org.

Registration includes: plenary session, three breakout sessions, continental breakfast, lunch, and materials.

The conference format includes a plenary session and breakout sessions focused on linking science assessment research to effective science teaching and learning and will feature **Dr. Eisenkraft**, Distinguished Professor of Science Education at the University of Massachusetts, Boston, Director of the Center of Science and Math in Context (COSMIC) and NSTA Past President. In this presentation, Dr. Eisenkraft describes the essential questions of science and contrasts them with the questions we often find on teacher generated tests as well as on high-stakes assessments and then discuss the implications.

Sixteen concurrent small group sessions relevant to the interests and needs of the practitioner audience are available. Breakout session presenters represent the fields of science education research, instructional materials development, assessment design, school administration, and teacher professional development.

Professional Development Institutes

NSTA has presented Professional Development Institutes (PDIs)—focused, content-based programs that explore key topics in significant depth—for the past four years.

Each institute begins with a full-day pre-conference session on Wednesday, March 26, 2008 followed by two

days of pathways sessions that offer a deeper exploration of the topics covered. Institutes are limited to 60 participants each.

Districts are encouraged to send a team of educators to take full advantage of this unique opportunity to support strategic planning for professional development. To inquire about a district group discount (\$295 first registrant; \$245 each additional), contact Alex Early at aearly@nsta.org.

Eleven institutes are offered, conducted by the following well-known professional Development providers and NSTA partners: BSCS Center for Professional Development; Concord Consortium; Education Development Center, Inc. (EDC); First Hand Learning, Inc. (FHL); Lawrence Hall of Science; Mid-continent Research for Education and Learning (McREL); National Science Resources Center (NSRC); South Carolina's Coalition for Mathematics and Science in partnership with the South Carolina Department of Education's Mathematics and Science Unit; and WestEd. For more information on each PDI, please visit www.nsta.org/conferences.

NSTA Professional Development Institutes are ticketed events by pre-registration only, and you must first register for the Boston conference to take advantage of this unique training opportunity. To register online for the Boston conference and to purchase tickets for NSTA Professional Development Institutes, visit our website at www.nsta.org/conferences.

NSTA professional development institutes are ticketed events (\$295*) by pre-registration only. For complete descriptions of each Institute and corresponding recommended pathway sessions, and to register, visit www.nsta.org/conferences.

Districts are encouraged to send a team of educators to take full advantage of this unique opportunity to support strategic planning for professional development. To inquire about a group discount (\$295 first registrant; \$245 each additional), contact Alex Early at aearly@nsta.org.

Learn more about the providers:

BSCS Center for Professional Development
www.bsccs.org

Concord Consortium
www.concord.org

Education Development Center
<http://cse.edc.org>

First Hand Learning
www.firsthandlearning.org

Lawrence Hall of Science
www.sepuplhs.org

Mid-continent Research for Education and Learning
www.mcrcel.org

National Science Resources Center
www.nsrconline.org

South Carolina Department of Education's Mathematics and Science Unit
www.sccoalition.org

WestEd
www.wested.org

Free Lesson Plans Allow Students to “Master the Science...Master the Game”

Join Nintendo, the National Institute of Aerospace, and Nortel LearnIT as they team to help students connect the science behind the fun of the Pokémon Diamond and Pokémon Pearl video games.

Free online lesson plans help explore the dimensions of time and space using the basic themes of the Pokémon Diamond and Pokémon Pearl video games. Students learn 21st Century science topics using 21st Century tools.

Visit www.masterthescience.org to download free lesson plans beginning now through the end of December 2007. A classroom activity component is also available, encouraging teachers to submit student products and questions to be answered by science experts. Check this site monthly looking for new resources and student work.

For award-winning, interactive lessons in math, science, language arts and life skills, visit the Pokémon Learning League, www.PokemonLearningLeague.com,

GREENING the SCIENCE LAB

You can make a positive contribution to the environment and science education by following the simple principles in “Greening the School Science Lab,” this month's free issue of Flinn Scientific Science Department Safety Training Notes. Click on the link below for easy ways to “go green” while reducing laboratory waste and improving safety.

Science teachers can make a big difference—in your students' lives, in protecting the environment . . . in the future. Thanks to the orders we receive from our customers, Flinn Scientific works to make a difference too. Your support helps us provide innova-

tive tools and services such as practical ways to reduce and neutralize laboratory waste to improve safety and protect the environment. Thank you for your support. We would be honored to receive your future orders.

You can always count on Flinn for quality products at low prices and fast delivery. To print "Greening the School Science Lab," please go to:
<http://www.flinnsci.com/Sections/Safety/Snotes/snotesm.asp>

Invasive Plants

Dear Educators:

I am contacting you to remind you of an exciting NEW resource for Alaska's science educators. The Homer Soil and Water Conservation District has developed and released "Invasive Plants: Taking Root in Alaska" curriculum for grades 9-12. The curriculum materials are available online and may be downloaded from:

<http://www.homerswcd.org/education/prgms/invedu.htm>

The curriculum includes a variety of modules including an online mapping exercise where students can check out local maps of invasive ornamental plants that have been recorded. I designed the curriculum with the busy, over-committed educator in mind. Special care was taken to make the curriculum locally-relevant and easy to integrate into biology and other science classes. It also includes a guide to Alaska State Science Standards that can be met with various sections.

If you would like a copy of the curriculum CD (which includes the intro presentation power-point file and assessment section) please contact me. I hope that you will find these materials useful and please take the time to fill out the form at the beginning of the packet to help us improve the curriculum. I hope that your school year is off to a great start, feel free to call with any questions!

Sincere Thanks,

- Caleb Slemmons -

Natural Resource Specialist

Invasive Plants Program Coordinator

Homer Soil & Water Conservation District
<<http://www.homerswcd.org/>>
4014 Lake St, Suite 201

Homer, AK 99603

Phone: (907) 235-8177 ext 5

Fax: (907) 235-2364

Teacher at Sea

The National Oceanic and Atmospheric Administration (NOAA) is now accepting applications for its Teacher at Sea program. The mission of NOAA's Teacher at Sea program is to give teachers a clearer insight into our ocean planet and a greater understanding of maritime work and studies, and to foster an interdisciplinary educational experience that provides a unique environment for learning and teaching.

Since 1990, NOAA's Teacher at Sea Program has enabled more than 500 teachers to gain first-hand experience of science and life at sea. Teachers have enriched their classroom curricula with a depth of understanding made possible by living and working side-by-side, day and night, with those who contribute to the world's body of scientific knowledge.

Teachers may select a cruise aboard one of NOAA's 19 ships, of which there are three main types. Fisheries research vessels perform biological and physical science studies in support of fisheries research; oceanographic and coastal research vessels perform physical science studies in support of physical oceanography, atmospheric studies, and bathymetric mapping; and hydrographic survey vessels scan the coastal sea floor with side-scan sonar and sophisticated bottom sounding systems to locate submerged obstructions and navigational hazards for the creation or update of the nation's nautical charts.

NOAA's Teacher at Sea Program accepts applications from currently employed K-12 teachers, college teachers, or museum or aquarium educators, both American and International. NOAA regrets that they cannot accept applications from student or pre-service teachers.

Teachers can expect to be at sea anywhere from one week to a month. Most teachers take advantage of cruises offered during the summer, but

cruises take place throughout year. All necessary travel costs are paid for by the NOAA Teacher at Sea Program. While airfare is paid for up-front by the government, all other necessary travel costs are reimbursed.

The deadline for application submission is Monday, 31 December 2007. All applications must be postmarked by this date.

For further information, please go to:

<http://teacheratsea.noaa.gov>

Or contact:

Elizabeth M. McMahon
Deputy Program Manager

Office of Marine and Aviation Operations
NOAA's Teacher at Sea Program
8403 Colesville Road, Suite 500
Silver Spring, MD 20910
Phone: 301-713-7611
Fax: 301-713-1541

Email: elizabeth.mcmahon@noaa.gov

<http://teacheratsea.noaa.gov>

<http://www.oma.noaa.gov>

Space Explorers

Dear Teachers,

I am excited about the opportunity the Alaska Aerospace Development Corporation has provided for Anchorage Schools. Alaska Aerospace Development Corporation co-sponsors the innovative Space Explorers science education program in over 100 Alaska schools. The nationally recognized Space Explorers Portal program provides the science curriculum materials and Internet-based programs needed for Alaska schools to bring space exploration into the classroom regardless of the school's urban, suburban or bush location.

The grant that we have covers the entire cost of the programs. Last year 118 Alaska schools participated. In the past 2 years, 34 Anchorage schools have participated in Space Explorers programs. There are now 140 grants for Alaska schools. I would like to fill those openings with as many Anchorage schools as possible.

All Anchorage Schools can participate in an actual NASA mission on-line or do the same plant experiment as the astronauts aboard the International Space Station. In the past, the plant experiment was not a part of the grant. This year, schools can partici-

pate in the plant experiment and receive the experiment kit instead of doing the NASA mission on-line, if they choose.

The Portal program has on-line and classroom-based activities for all grade levels, K - 12, that include lesson plans for teachers, on-line mission simulations, classroom experiments, on-line chats with astronauts and scientists, and take-home activities. Interactive and hands-on earth, space, life, and physical sciences activities and lessons teach students the fundamentals of space research and exploration.

Educators are encouraged to complete an application to participate in the program. Training is provided to teachers.

<http://www.space-explorers.com/grants/form2.asp>

NPR: How the U.S. Measures Up in Math and Science

A team of researchers have re-assessed the results of several common measures of math and science education success. One researcher says that, when it comes to math and science, the study found that "American students are no worse, and often score better, than students from many leading countries." <http://www.npr.org/templates/story/story.php?storyId=16150041>]

MRSA

This from "Scott Goeke" <scott.goeke@sbri.org> at Seattle Biomedical Research Institute.
Scott Goeke, Ph.D.

Hello Science Teachers,

With the recent barrage of media stories on methicillin-resistant Staphylococcus aureus (MRSA), I thought your students' interests might have been piqued on the subject--particularly with the recent closing of schools in Port Townsend due to MRSA infections in both a high school football player and an adult staff member at their pre-school. Many of you may know of the problems fighting multi-drug resistant tuberculosis from recent news stories. Of course the problem isn't limited to TB, all pathogens have the potential to develop resistance to the arsenal of drugs that we use to fight them off. Right now MRSA is on peo-

ple's minds, so here are a few links to help get you ahead of the curve should you or your students want to discuss it in the classroom.

First, here's some background on MRSA from the CDC:http://www.cdc.gov/ncidod/dhqp/ar_mrsa.html

Next we come closer to home, looking at MRSA in the Puget Sound region:

<http://www.komotv.com/news/local/10959671.html>

http://seattletimes.nwsourc.com/html/localnews/2003989830_webmrsa02m.html

<http://www.bellinghamherald.com/northwest/story/223088.html>

http://seattlepi.nwsourc.com/local/6420AP_WA_MRSA_Port_Townsend.html

And there is also a side discussion about whether adding the drug tricolsan to soap helps or hinders the fight against pathogens like MRSA:

<http://www.nytimes.com/2007/10/30/health/30well.html?ei=5090&en=6e0433289802d21f&ex=1351396800&partner=rssuserland&emc=rss&pagewanted=print>

For the audiophiles out there, there are also a couple of podcasts.

Background on MRSA from the CDC:

<http://www2a.cdc.gov/podcasts/player.asp?f=6936>

A story about the media reaction and reporting on MRSA from NPR's "On The Media":

<http://www.onthemedi.org/episodes/2007/11/02/segments/88310>

Thanks,

Scott Goeke, Ph.D.

Seattle Biomedical Research Institute

307 Westlake Ave. N.

Suite 500

Seattle, WA 98109

Phone: (206) 256-7198

Fax: (206) 256-7229

Step Up To Writing

A Step Up to Writing class is being offered right after Thanksgiving. This class is perfect for both beginning users as well as teachers who have been using it for a while. Nineteen teachers have already signed up, but more space is available.

Fast Facts About the class:

Dates/Times

Thursday, November 29 (3:45-7:45)

Friday, November 30 (3:45-9:45)

Saturday, December 1 (9:00-4:00)

Location

Wendler MS, Room 130

Instructor

Janene Schoenborn

Cost

\$94 – UAA, 1-credit

Amy Goodman

Anchorage School District

MS Literacy Support Teacher

907.267.0221

<http://www.asdk12.org/middlelink>
