



Secondary Science Bytes

A newsletter for secondary teachers of science

April 13, 2007



*Celebrate Earth Day with
National Geographic's
Online Workshop:
April 16-28, 2007*

To celebrate Earth Day, National Geographic will host an online teacher workshop to focus on the future of our ocean as a key environmental issue for the classroom. Drs. Carl Safina, Gregg Marshall, and Michael Libbee will discuss their research with teachers and demonstrate how to share their findings with students.

Since 1969, environmental issues have grown in number, importance, and complexity. Perhaps one of the most unexpected issues has been the recent prediction that we may be facing a complete collapse in marine species by 2050. *Is this possible? What does this mean and what can we do to prevent this disaster?*

This online teachers' workshop will examine fisheries from three perspectives: (1) The blue fin tuna – What is happening to a one of the most important commercial species in the ocean? (2) Newfoundland – How has the change in fisheries affected a region historically dependent on the ocean? and (3) New Zealand – What lessons can be learned by this pioneer in marine protected areas?

The workshop is open to all teachers and educators looking for a way to bring the wonder of the world's oceans to their students. Teacher resources will include access to research findings, lesson plans, links to news stories, *National Geographic* magazine articles, video clips, internet

links, and a photographic archive that illustrate these issues.

Educator participants will interact online with research scientists to explore the state and future of our ocean's fisheries, as well as exploring biological and environmental aspects of fisheries and ideas on how to protect and sustain this vital resource. Classroom application of topics is emphasized.

This workshop is free, with a option to earn graduate credit at a cost of \$90.00. Registration opens on April 3; the course runs from April 16 - 28, 2007.

For more information or to register after April 3rd, please visit: www.coexploration.org/ngs/EarthDay.

**Joint Oceanographic
Institutions Learning**
is pleased to offer three very special professional development opportunities this summer and throughout the year!
Don't delay as space is limited.

Ninetyeast Ridge Expedition
An Ocean-going Research Experience for
Earth and Ocean Science Educators
15 June – 15 August 2007
Application Deadline: Friday, 20 April
Only 1 educator will be selected!

Prior to scientific ocean drilling projects, marine geological research expeditions explore and map the areas proposed for drilling. The Ninetyeast Ridge Expedition is one such "site survey" study. The Ninetyeast Ridge Expedition will be conducted aboard the research vessel Roger Revelle, a 273-ft oceanographic research ship, between 15 June and 15 August 2007. Ninetyeast Ridge is one of the longest linear features on Earth. It is a 4000-km long volcanic ridge that stretches north-south, across the equator, in the eastern Indian Ocean. Its name comes from the fact that it is nearly coincident with the 90°E meridian. One educator will be selected to participate and to interpret the expedition for a variety of shore-based audiences! Applicants will be notified by Friday, 4 May. For more information, see http://joilearning.org/pdf/NER_Expedition_desc.pdf

School of Rock 2007

Exploring Ocean Cores at the Gulf Coast Repository

22 – 28 July, 2007

Application Deadline: Friday, 20 April

Only 12 spaces available

Because the JOIDES Resolution is now undergoing renovations, the next week-long School of Rock teacher research experience is scheduled to begin on Sunday, 22 July, 2007 at the Gulf Coast Repository (GCR) at Texas A&M University. What's so special about the GCR? Only about 60 miles of cores are stored there! Fact sheets and applications can be downloaded from <http://www.iodp-usio.org/Education/SOR.html>

JOI Learning Teacher Sabbatical in Washington, D.C. 2007 School Year

Application Deadline: Friday, 20 April

Only 1 educator will be selected!

The Joint Oceanographic Institutions is seeking an enthusiastic teacher for a one-year sabbatical in Washington, DC. The teacher will work

with JOI Learning staff to develop ocean science curriculum, produce teacher-training workshops, and assist in conference logistics. The position requires a minimum of 3 years experience teaching science in the classroom, a strong background in earth or ocean sciences, and temporary relocation to Washington, DC. Strong computer skills are a plus. Salary will equal the incumbent's current salary with a cost-of-living adjustment. To apply for the position, send a cover letter, resume, and three references to scooper@joiscience by April 20, 2007

High School Teacher Workshop on Mercury in the Environment (for High School Science Teachers)

at Stanford University July 16-19, 2007

Looking for a new way to teach science in the classroom? Interested in learning about the chemistry of mercury in the environment? This workshop is for chemistry, biology, earth science, and environmental science teachers.

Combining science research and educational pedagogy, teachers spend 4 days learning about mercury and developing lessons to teach in their classrooms. The workshop uses the innovative scientific findings of the Environmental Molecular Science Institute to design lesson plans. In addition to using the new information as a means to ground instruction in real problems, pedagogical approaches to science language instruction will be presented.

Who: High School Science Teachers

Where: Stanford University

When: July 16 - 19, 2007, 9 am - 4 pm

Stipend: \$400 plus \$400 after classroom lesson presentation

How: **Apply by May 15**

Commitment: Develop a lesson and teach the lesson in your classroom during the 2007-08 year.

Credit: 2 units for \$75 from Stanford Continuing Education

Flyer and application can be downloaded at

<http://emsi.stanford.edu/Education.html>

or contact Jennifer Saltzman at (650) 725-2410 or saltzman@stanford.edu

ASDSA - Anchorage School District Summer Academy

The Math Curriculum Department is happy to announce there will be a 2-day, one credit Statistics class at the ASDSA (June 6, 7). It is still not posted, but will be soon. It will be a great class with applicability for either math or science teachers.

Help! Can you help evaluate a new concept?

Depending on your location (below), access one of these web sites with 2-minute space movies, try it with your class, and then fill out the short feedback form. These digital movies can be integrated with existing lessons, and are hosted on our own school network servers to improve performance. They also demonstrate a non-profit PBS model of funding support, to provide classroom media at no cost. If this idea works, we can make it grow. But it won't work unless you try it! Please take a look:

If you're inside ASD (ASD's District Connection), click here:

[https://home.asdk12.org/index.asp?redirect=SCIENCE:](https://home.asdk12.org/index.asp?redirect=SCIENCE)

If you're inside FNSBSD click here:

<http://www.northstar.k12.ak.us/scientificliving/index.html>

If you're outside ASD or FNSBSD, click here:

<http://www.eed.state.ak.us/tls/Frameworks2/Support%20docs/Scientific%20Living/index.html>

These sites are underwritten by Alyeska Pipeline. It begins with a unit on Earth/Space Science, but if successful, it will continue with additional units on other topics. Please fill out the "feedback form" on the web site, and thanks in advance for your help.

Check this out!

Movies for Science and Technology at:

http://www.thefutureschannel.com/screening_room.php

Main science topics are:

Agriculture, Alternative Energy, Biology, Earth and Environmental Science, Physical Science and The Nature of Science.

Within each of these topic areas are several movies as well as accompanying lesson plans.

At school the movies might take a bit of time to load, but you could load the movie on your classroom computer (if you have one) and show it to the whole class - or give students the link so they can watch at home. Thank you to the science teacher that sent this link!

Check this out!

Debbie Soltis (at Chugiak High) says:

“I just did a web seminar sponsored by NSTA and thought you all should know about it. The web address is:

http://institute.nsta.org/web_seminars.asp

It was SO easy to do, and I got a lot out of it. It took about 60 minutes (live time), but didn't start until 2:30 PM, so it worked out well for the high school time. I did the one on engineering.

There are others in the future (see web address). Since we have emac's, they already have the illuminate program needed to conduct the interactive seminar.

There's a moderator, a presentation, a chance to both answer and ask questions, and they give you free ideas!! I think everyone should check it out, and see if there's something they could use. No travel time, no follow up work to do, and you can even take your shoes off!!”

Thanks Debbie!!

Two New Publications Available

The *Educational Materials* section of NASA's Web site offers classroom activities, educator guides, posters and other types of resources that are available for use in the classroom. Materials are listed by type, grade level and subject. To learn more about these materials please go to:

<http://www.nasa.gov/audience/foreducators/topnav/materials/about/index.html>

A new brochure is now available in the Brochures section of the Educational Materials area. The *For Educators* flier describes the five sections of the *For Educators* area of the NASA.gov Web site. These five sections present information about NASA's educational projects and educator resources. This flier includes brief descriptions about the following content on the site: Educational Materials, Classroom Resources by Subject, Educational Features, Online Resources, Educational News, Act Now, NASA Education TV Schedule and Monthly Topics, EXPRESS Mailing List, A-Z Index, and Contacts. Download the *For Educators* flier from the following location:

http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/For_Educators_Flier.html

NASA Student Opportunities Podcast Brochure

The NASA Student Opportunities podcast features students who tell about their experiences with America's space agency. Each episode also informs high school and college students about current NASA internships, fellowships, contests and other student opportunities. This brochure describes the free podcast and how to subscribe. Download the NASA Student Opportunities Podcast brochure from the following location:

http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/NASA_Student_Opportunities_Podcast_Brochure.html

Wesleyan College, a liberal arts college for women, invites applications for an assistant professor in science education beginning in August, 2007.

This person should have a doctorate in the field with successful teaching at the elementary, middle, high school and/or college level(s). The successful applicant will teach various undergraduate and graduate education courses, including courses in science education.

This position would be ideal for the science teacher who is retiring and wants to remain active in the work force. In addition, this applicant would have the opportunity to train prospective teachers in science pedagogy and content. If you have such a person in your school system, he/she should send letter of interest, vita, transcripts, statement of teaching philosophy, and three current (2006-2007) letters of recommendation to Mrs. Amber Poulson (apoulson@wesleyancollege.edu), administrative assistant, Department of Education, Wesleyan College, 4760 Forsyth Road, Macon, GA 31210. Please contact Mrs. Poulson if you have questions (478) 757-5117.

DONATE YOUR BODY TO SCIENCE THIS SUMMER

Imaginarium Explorer Camps are seeking motivated Camp Instructors for our seasonal science day camp program.

The Imaginarium is a private, non-profit science museum dedicated to increasing the public's understanding of science and technology through hands-on education programs and exhibits. Camp Instructors are contracted employees who are dynamic science-lovers and professional educators.

For full job descriptions and an employment application, please visit The Imaginarium's web-site at <http://www.imaginarium.org/jobs.html> . To

apply, fax a completed application, resume, and cover letter to us at (907) 258-4306, or mail it to us at 737 W. 5th Ave., Ste. G., Anchorage, AK 99501, Attention: Susanna Mishler.

If you have questions for Susanna you may email her at smishler@imaginarium.org or call her directly at 343-0614.



National Aviation Hall of Fame to present the A. Scott Crossfield Aerospace Education Teacher of the Year Award

The National Aviation Hall of Fame announced that it has been appointed to serve as the new steward of the prestigious A. Scott Crossfield Aerospace Education Teacher of the Year Award. More commonly referred to as The Crossfield Award, the annual juried competition was founded by the late, legendary aviator in 1986 in memory of the public school teachers who influenced his life and to reward excellence in classroom aerospace education. After Crossfield's death in 2006, his family felt the NAHF would best serve to oversee the evolution of the award as a logical extension of the non-profit organization's SkyReach education initiative.

"The objective of the award is to recognize and reward aerospace education teachers for outstanding achievement in aerospace education and to further achievement in teaching aerospace," to quote Crossfield from original award documents.

Crossfield was inducted into the NAHF in 1983 in recognition of his contributions made as a Naval aviator, aerospace engineer and test pilot. He is best known as the first man to successfully fly at speeds of Mach 2 and Mach 3, and contributing to the safety of manned space-flight, among his many other achievements.

The annual contest is open to current classroom teachers from grades K through 12 from any public, private or parochial school. A review committee will examine qualifying nominations for documentation of a teacher's abilities to enhance teaching effectiveness, demonstrate honorable attributes and personal improvement, and maintain high standards for their students and themselves.

The selected educator and their guest will receive an all expenses paid trip to Dayton for the annual NAHF President's Reception and Dinner on Friday, July 20, where the Crossfield Award recipient will be presented a \$1,000 cash stipend as a featured part of the program.

Additionally, the recipient and their guest will be hosted by the NAHF at the 46th Annual Enshrinement Dinner & Ceremony, held at the Dayton Convention Center the following evening.

The deadline for nominations is May 25, 2007, and full information about the Crossfield Award purpose and qualifications may be found along with submission forms on www.nationalaviation.org. As defined by Crossfield, "aerospace education" is a branch of general education concerned with communicating knowledge, skills, and attitudes about aerospace activities and the total impact of air and space vehicles upon society.

For more information about The Crossfield Award, the NAHF, and its upcoming 2007 enshrinement events, visit www.nationalaviation.org or call 937-256-0944 x10.

Space Day

Space Day, which will be held this year on May 4, 2007, is an annual event sponsored by Lockheed Martin that uses space-related activities to build skills and inspire students in math, science, engineering, and technology.

Visit www.spaceday.org for:

Space Day Lessons Unit—Download easy-to-use lessons that connect to National Science Education Standards (grades 5–8). All lessons provide hands-on experiences for students, use readily available materials, and include reproducible student worksheets.

Building Out a Space Day Event—Information and ideas on planning a Space Day event in your classroom or school.

Discovery's Science Channel will celebrate "Space Week" from May 6–12 by showing space-related documentaries each evening. The centerpiece of the week is the premiere of STARSHIP ORION, which will air at 9 p.m. on Tuesday, May 8, and again at 10 p.m. on Saturday, May 12. Orion is the space vehicle that will replace the space shuttle and take humans back to the moon and beyond. Visit the Space Day website for program details or check your local listings.



Check these out - for kids

Games, Projects, Animations, Cool Subjects,
Amazing Facts and Sharing

How Do Hurricanes Form?

<http://spaceplace.nasa.gov/en/kids/goes/hurricanes/>
and in espanol:

<http://spaceplace.nasa.gov/sp/kids/goes/hurricanes/index.shtml>

Orbits R Us

http://spaceplace.nasa.gov/en/kids/goes/goes_poes_orbits.shtml
and

http://spaceplace.nasa.gov/sp/kids/goes/goes_poes_orbits.shtml

Migration Concentration (game)

http://spaceplace.nasa.gov/en/kids/poes_tracking/index.shtml
and

http://spaceplace.nasa.gov/sp/kids/poes_tracking/index.shtml

Alaska Science Teacher's Association

If you are not already a member, please consider joining this local professional organization. ASTA has a great website with information about upcoming events and trainings, local and national science education news, resources, mini-grants, and a variety of other helpful items. Under the topic of events are several professional development opportunities for this summer. <http://www.aksta.org/events.html>

ASTA is co-sponsoring the upcoming Math & Science Conference:

Math + Science = Pipeline to the Future

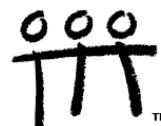
October 18-20, 2007 in Anchorage

Watch the ASTA website for Request For Proposal forms - to be posted soon - consider sharing your expertise with your colleagues!

<http://www.aksta.org/index.html>

Apply to join the National Science Education Leadership Association and TI-Teachers Teaching with Technology for 8 days of professional development

Monday June 25 through Monday July 2, 2007
Includes the [NSELA Summer Leadership Institute at the Asilomar Conference Grounds, Pacific Grove, CA June 28- July 2, 2007.](#)



T³ • Teachers Teaching with Technology™

Professional Development Services from Texas Instruments



Begin with 4 days of professional development on Physics/Physical Science delivered by a T3-Teachers Teaching with Technology™ National Instructor.

When: Beginning on Monday June 25, 2007- noon Thurs. June 28, 2007

Where: Embassy Suites Monterey Bay, CA,

Who: Physics/physical science teachers from across the country.

Transfer to the NSELA Summer Leadership Institute

When: Beginning Thursday June 28, 2007- Monday July 2, 2007

Where: Asilomar Conference Grounds, Pacific Grove, CA,

Who: Science education leaders from across the country

Each participant will receive:

- Lodging at the Embassy Suites Monterey Bay Hotel and at the Asilomar Conference Center
- Complimentary transportation from the San Jose, CA airport
- Meals except for dinner on June 25th through June 27th
- TI-84 Plus calculator
- Calculator Based Ranger (CBR 2)™
- Vernier Physics with Calculators workbook

- TI Explorations: Modeling Motion in High School Mathematics
- A significant subsidy for the NSELA Summer Leadership Institute resulting in a lower cost to the participant

If selected each participant will be responsible for:

- Transportation to and from home to the San Jose, CA airport or the Embassy Suites Monterey Bay Hotel
- A registration fee of \$500 which combines both events from June 25th through July 2nd
- Evening meals for the first three days

With successful completion, participants will have made the first step to possibly becoming certified trainers for Texas Instruments.

Texas Instruments trainers receive:

1. Expenses to national meetings
2. Stipends
3. Opportunities for continued professional development

Criteria for Participant Selection:

1. Must be science administrator or classroom teacher currently teaching AP Physics, Physics or Physical Science
2. Preferred experience in presenting or providing staff development on topics in science
3. Preferred experience with TI technology, * current regular users preferred
4. Must be an NSELA member or be recommended by a member of NSELA
5. By December 31, 2008 each participant agrees to present at a local, state, or national meeting in documented sessions on Science and TI technology.

Enrollment will be limited to 20 participants

[Download an application](#) and return it by April 29, 2007.

NSRC - National Science Resources Center an organization of the The National Academies and Smithsonian Institution are offering Science Education Academies for Teachers.

The four academy topics are:

- ***Energy and Motion*** July 8-13
Washington, DC
- ***Biodiversity*** July 15-20
Washington, DC
- ***Ecological Field Studies*** July 22-27
National Zoological Park Conservation and Research Center Front Royal, Virginia
- ***Electricity and Magnetism*** August 5-10
Washington DC

For more information about each of the workshops and to apply - please go to:
http://www.nsrconline.org/professional_development/index.html

ASD Media Catalog Items

Gail at ASD Media Services has asked me to inform you that her calendar for the 2007-2008 school year is ready for you to begin booking your media needs for fall.

Following is a reminder of how to access the ASD Media items:

Here is a mini-lesson/reminder of how to find and check out materials from the district AV department:

- Log onto the district home website at:
<https://home.asdk12.org/index.asp>
- Log in using the same name and password that you use for your district email.
- Go down the page and look for Departments on the left.
- Click under Audio/Visual Department "[Media Catalog](#)."
- From that point I usually go to Search Full Catalog.

- The search word that I usually use is "Science" for subject - the folks at AV suggest that you don't change any of the other buttons-I was told that it is ok to change the format button though.

- If you want to search for a particular topic - try to think "big." For example for Global Warming - use the search word Weather. The NOVA programs you can search for using the word NOVA, and Bill Nye, use Bill Nye as your search word.

- I then read through the titles presented and click on the title to read the description. There is a letter after the title and number: I S = Intermediate Science, S = Secondary.

- As you decide which material you want, there is a button to click on the page with the description, or to check out materials you go to "Order Form".

- Your Client Number is the last 6 of your social security number and your password (for the first time you log on) is your school phone number- after that you can change your password.

Please take a few minutes and check out the great selection that the district has!

With any questions regarding how to check things out or materials available from AV - you can contact Gail Sampson via email or call her at 742-6000.