



SCIENCE BYTES

DECEMBER 9, 2008 VOLUME 17

This is an information exchange that is available to all teachers in the Anchorage School District. Please read and then DO it!

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December 2008

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For your Calendar:

NSTA Conferences 2008-2009

2009 National NSTA Conference

New Orleans, LA – March 19-22, 2009

Science Fair 2008 - 2009

Alaska Science and Engineering Fair

March 27-29, 2008 @ Begich Middle School - Anchorage
Looking for volunteers for the SF Board.

Science Olympiad 2008-09

April 4, 2009 @ Begich Middle School - Anchorage

2009 - Alaska Math & Science Conference

INQUIRY - The Bridge to Understanding
October 14-17, 2009 Juneau, AK

CCSC - Fireside Chat--December 17

The Big Blue Sea

It bounds our western coast, produces over half the nation's fish catch, is home to a diverse array of marine life, and sits on the front lines of climate change. Despite its proximity and importance, there is much that we do not know or understand about the Bering Sea. The North Pacific Research Board (NPRB) and the National Science Foundation have launched a new five-year integrated ecosystem study of the Bering Sea. Thomas Van Pelt, the biologist with the NPRB who is managing the project, will describe the scope and goals of this ambitious new research program. The program begins at 7:00 pm on Wednesday December 17th at the BLM Campbell Creek Science Center (5600 Science Center Drive). For more information, please call 267-1247.

Anchorage Light Speed Planet Walk

In cooperation with the Muni Parks and Rec, the Planet Walk Run Committee has developed a concept of a series of community events involving the planet walk. These events have been approved by the Anchorage Rotary Board as Anchorage Light Speed Planet Walk activities in Cooperation with Parks and Rec. The first event will be a low key, family participation, "non-competitive" event on Dec 21 at 10am to 3pm (more information to follow) starting at Kincaid Park. Participants can walk, run, ski or bike the course: their choice. People will sign up at the Kincaid Chalet to do "orbits" of their choice beginning at the "Pluto Station" in Kincaid and headed toward Anchorage ... they can go to Neptune and return, Uranus and return/terminate, Saturn and return / terminate, Jupiter and return/terminate or do the entire planet walk to Elderberry Park (Mars station.) Times will be kept and people will be "on their honor" when reporting their respective completions. The idea is to encourage people to get out and enjoy the shortest day of the year and the planet walk at whatever level and exertion they like.

We will have another event of a more competitive nature on the Vernal Equinox in March. Events will also occur on or about the summer solstice in June and the Autumnal Equinox in September.

On December 21st, we would like to invite ASD staff, students, parents and families to participate in this community event. The idea is to have fun outdoors using the Planet Walk as the setting while getting exercise and appreciating the science of astronomy and nature.

This is an intentionally low budget event emphasizing family and community fun and activity.

Please let me know how we can further involve the ASD and the participation of staff, students and families.

Sincerely,

Jon Deisher

Anchorage Rotary

Planet Walk Run Committee

Speak Up Surveys!

The Anchorage School District will be participating in Speak Up 2008, which is a series of online surveys to gather perspectives from students, parents, teachers, and administrators about the following topics: Technology usage & designing 21st century schools Science Education and Career Exploration 21st Century skills: information and media literacy Emerging Trends: digital content, broadband access and policy, and online learning

This is the first year that ASD is participating in the Speak Up survey, and it is only open until Friday, December 19th. Due to a limited timeline to advertise the survey to parents, student participation cannot be part of the instructional day; however, please encourage students and parents to participate from home. Since we know that we will have a lower than optimal student and parent response in this baseline year, it will be greatly appreciated if you could encourage all teachers and administrators at your site to participate. (Please note, there is an option to take the Speak Up survey in Spanish.)

There is a link to the Speak Up survey from ASD's main webpage, or participants can go to <http://www.netdayspeakup.org/speakup2008/index.asp> Click on the survey you are interested in taking (student, parent, teacher/administrator, Spanish) Enter part of your school name (usually the first word is enough) and AK (State) - click find school. Select your school from the list of results Enter your secret word: asdk12. Select the grade level, or type of survey and get started

If you would like to learn more about Speak Up, visit: <http://www.netdayspeakup.org/speakup2008/>

Teacher Scholarships Available for Summer Courses in Denali

Application Deadline: January 4

Application Information:

<http://www.alaskageographic.org/static/428/scholarships>

The Murie Science and Learning Center is awarding scholarships to teachers for accredited trainings and field seminars this summer in Denali National Park. These small-group field courses use Denali as their classroom and will explore science, research, and educational

opportunities. Most courses are three days in length. Participants stay at a remote field camp and explore the park by vehicle and hiking excursions. Professional development credit (1-3 credits) is made available through the University of Alaska. For information about the courses and application process please visit the Murie Science and Learning Center at <http://www.murieslc.org/> or [Alaska Geographic at http://www.alaskageographic.org/](http://www.alaskageographic.org/) . The application deadline is January 4, 2009.

Contact Information: email the Murie Science and Learning Center or call (907) 683-1269, or (888) 688-1269.

from NSTA Building A Presence (BaP) - Alaska Opportunity #1 - The USA Biology Olympiad

This is the premiere biology competition in the United States. Starting with almost 10,000 registered students from 40 states in 2008, the competition ultimately selects 4 students as "Team USA" who will represent our nation at the International Biology Olympiad. Last year, for the second year in a row, Team USA returned home from the International Biology Olympiad with 4 gold medals. The team hopes to capitalize on this success in 2009!

Additionally, the USA Biology Olympiad also offers a "Teacher Resource Center" to registered schools to assist teachers. The Teacher Resource Center includes practice exams with answer keys, links to International Biology Olympiad exams, textbook recommendations, links to outside professional development opportunities and study guides, as well as a breakdown of the grading rubric and testing protocol.

The USA Biology Olympiad provides an outstanding forum for aspiring biologists to learn and grow in the discipline through interaction with other likeminded students. Take advantage of this opportunity to challenge your outstanding students. For additional information, the program schedule and online registration visit: www.cee.org You can also contact Marcy Reedy, Manager of the USA Biology Olympiad, at mreedy@cee.org or 703-448-9062.

Opportunity #2 -Alaska Forum on the Environment 2009

The Alaska Forum is pleased to announce that the Alaska Forum on the Environment, 2009, will be held February 2-6, 2009, using both the Anchorage Egan Convention Center and the new Dena'ina Center for the event! This year we will offer over 80 technical breakout sessions and 8 sensational Keynote Events. For 2009, we have expanded our content and our partnerships. We will continue to offer a full week of sessions on climate

change, energy, environmental regulations, cleanup and remediation, fish & wildlife, solid waste, and of course much more.

New for 2009: In recognition of the 20th year after the Exxon Valdez Oil Spill, we will be hosting sessions covering the status of species and resources injured by the Spill, and current spill prevention efforts and response capability. We will be celebrating the 10th year of the federal Denali Commission's efforts to improve energy systems, public health, and other infrastructure support to Rural Alaska. For more information about the event including the developing agenda, please visit our website at <http://www.akforum.org/> <http://www.akforum.org>

Opportunity #3 - Educator and Launch Conferences

There are two upcoming Educator Launch Conferences in early 2009. You can download registration application, maps, hotel info, at <http://www.endeavours.org/sec/> Educator Launch Conference on front screen. Past Educator Launch Conference programs are posted on the website (Calipso-Cloudsat, AIM and OSTM/Jason-2) and OCO and NOAA-NP will have a similar format.

There is an OCO and NOAA block rate for all K-16 teachers, at Quality Inn and Executive Suites Hotel, Lompoc (\$75 + tax) to make a reservation at 805-735-8555. Fifty rooms available, first come, first serve.

You will participate in quality Science, Technology, Engineering and Math (STEM) workshops, presentations by NASA and NOAA Scientists and Engineers at the dinner banquet and view the launch of the NASA and NOAA satellites into Space from Vandenberg AFB.

1). *Orbiting Carbon Observatory (January 14-15, 2009)*. NASA JPL OCO Satellite will be launched from Vandenberg AFB on a Taurus Rocket (2:58 AM, 15 January 2009). For more information: <http://oco.jpl.nasa.gov/>

2). *NOAA-N Prime (3-4 February)*. NOAA-N Prime Satellite will be launched from Vandenberg AFB on a Delta II Rocket (2:22 AM, 4 February 2009) For more information:

<http://goespoes.gsfc.nasa.gov/poes/index.html>

There is no guarantee the launch will go due to various factors.

Opportunity #4 -Understanding How Science Works

This is a great website!

<http://undsci.berkeley.edu/index.php>

<<http://undsci.berkeley.edu/index.php>>

Opportunity #5 - National Environmental Education Week April 12-18, 2009 Be Water Wise!

National Environmental Education Week (EE Week) is the nation's largest organized environmental education event. Held each April, EE Week promotes understanding and protection of the natural world by actively engaging K-12th grade students and educators of all subjects in an inspired week of environmental learning and service before Earth Day. Join the thousands of schools, nature centers, zoos, museums, and aquariums nationwide who have made a commitment to engage students in environmental learning through participation in EE Week!

This year's EE Week theme is Be Water Wise! Registered partners will have access to a wide variety of FREE environmental education resources, including:

- * Standards-based environmental education lessons and activities, including water conservation, watershed, and water quality curricula,

- * Access to EE Week's school water audit tool in which students "find the leaks" in water usage at school,

- * Opportunities for online communication and knowledge-sharing with educators from across the country, including participation in the EE Week Photo Blog contest,

- * Monthly electronic newsletters highlighting the latest EE curricula, professional development, and funding opportunities,

- * Certificates of participation for themselves and their students, and

- * A free issue of National Geographic Explorer magazine for those registering before January 30, 2009!

You can join a national network of educators dedicated to increasing environmental literacy, promote environmental learning, and gain national exposure for your school or organization by registering today!

Questions? Contact Jessica Culverhouse at culverhouse@neefusa.org or call 202-261-6484.

<http://www.EEWeek.org> <<http://www.EEWeek.org>>

Opportunity #6 - PBS Article-How One Preschool Science Program is Developing Young Scientists

This article provides suggestions on how to incorporate science into your early childhood classroom by creating opportunities for children to explore science objects. A list of additional resources is included.

<http://www.pbs.org/teachers/earlychildhood/articles/science.html>

<<http://www.pbs.org/teachers/earlychildhood/articles/science.html>>

Opportunity #7 - Gr 6-8: Christopher Columbus Awards for Middle School Science

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

The Christopher Columbus Awards is a national, community-based science and technology program for middle school students. The program challenges students to work in teams of three to four, with an adult coach, to identify a problem in their community and apply the scientific method to create an innovative solution to that problem. Eight finalist teams and their coaches will receive an all-expense-paid trip to Walt Disney World to attend national Championship Week and compete for valuable U.S. Savings Bonds and the \$25,000 Columbus Foundation Community Grant, plus a \$200 development grant to further refine their idea.

Entries must be postmarked by February 9, 2009.

Opportunity #8 - Gr 9-12: Planet Connect High School Challenge Grants

<http://www.Planet-Connect.com>
<<http://www.Planet-Connect.com>>
Application deadline January 20, 2009

Do you know a high school student with an innovative solution to protect the environment? Planet Connect can help make it happen! The National Environmental Education Foundation's Planet Connect Program, developed in partnership with The Weather Channel, is a new online network for High School students to learn about the environment plus green college and career options. Planet Connect is looking for creative ideas to fix local environmental problems and will award 25 students aged 14-19, \$1000 each to support their ideas and provide them with local environmental internships. Visit www.Planet-Connect.com for more information or to apply.

Opportunity #9 - 2009 National Youth Science Camp

<http://www.nysc.org> <<http://www.nysc.org>>
Applications to attend the 2009 National Youth Science Camp are now available online at www.nysc.org/2009. Two graduating high school students from each state will be selected to represent their state at the all-expenses paid honors program that will be held from July 1 through July 25, 2009. To apply, please download the application packet from <http://www.nysc.org/2009> <<http://www.nysc.org/2009>>

Questions? Contact Lynn Elfner at 614-488-2228 or oas@iwaynet.net. The NYSC is hosted and operated by the National Youth Science Foundation (<http://www.nysf.com>) <<http://www.nysf.com>>.

Opportunity #10 - Digital Planetariums

With help from a \$488,000 NASA grant, the University of Alaska Museum of the North and scientists at the UAF Geophysical Institute are joining forces to bring the state's only digital portable planetarium to communities in rural Alaska. For more information:

<http://www.uaf.edu/news/headlines/20081114155829.html>

Opportunity #11 - The Siemens We Can Change the World Challenge

This competition is for teams of 2-3 students, led by a teacher or mentor, to create sustainable, reproducible environmental improvements in their local communities. Deadline is March 15, 2009. Information is available at: <http://wecanchange.com> <<http://wecanchange.com>>

Opportunity #12 - Discover the Universe: NASA/NSTA Web Seminar Dec. 16, 2008 and Jan. 20, 2009

Join NASA and NSTA for two free Web seminars featuring NASA scientists and education specialists. The seminars will focus on key science concepts -- Earth's place in the universe; light, energy, and optics; and models and evidence in science -- as participants investigate how NASA's space-based missions extend the legacy of observation and discovery that Galileo Galilei initiated when he turned his telescope to the skies in 1609. Presenters will share their science expertise, answer questions from the participants and provide information regarding educational Web sites.

Designed for educators of grades 5-12, the 90-minute seminars will begin at 6:30 p.m. EST on Dec. 16, 2008, and 6:30 p.m. EST on Jan. 20, 2009.

To learn more about these seminars and to register online, visit http://learningcenter.nsta.org/products/symposia_seminars/fall08/NASA/webseminar.aspx.

Opportunity #13 - Climate Discovery Online Courses for Educators Pre-registration deadline: Jan. 1, 2009

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. There is a \$225 fee per course (save \$25 if you register by Jan. 1). The courses run concurrently from January 23 through March 15, 2009.

• *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.

For complete course schedule and registration information, visit <http://ecourses.ncar.ucar.edu>

Opportunity #14 - 2009-2010 EINSTEIN FELLOWSHIPS for K-12 Teachers

Applications Due: Jan. 13, 2009

The Albert Einstein Distinguished Educator Fellowship is a paid fellowship for K-12 math, science, and technology teachers. Einstein Fellows spend a school year in Washington, DC, serving in a federal agency or on Capitol Hill. Placement opportunities with federal agencies vary slightly year to year, but may include NASA, National Science Foundation, the Department of Energy, and the National Oceanic and Atmospheric Administration.

To be considered for an Einstein Fellowship during the 2009-2010 school year, one must apply and submit three letters of recommendation online at <https://applicationlink.labworks.org/applicationlink/default.htm>.

For more information about the Einstein Fellows program visit www.trianglecoalition.org/ein.htm or contact Liz Burck at burckl@triangle-coalition.org.

Opportunity #15 - NASA invites Students to Name New Mars Rover

Entries Due: Jan. 25, 2009

NASA, in cooperation with Walt Disney Studios Motion Pictures' movie WALL-E from Pixar Animation Studios, will conduct a naming contest for its car-sized Mars Science Laboratory rover that is scheduled for launch in 2009. The contest is open to students 5 to 18 years old who attend a U.S. school and are enrolled in the current academic year. To enter the contest, students will submit essays explaining why their suggested name for the rover should be chosen. In March 2009, the public will have an opportunity to rank nine finalist names via

the Internet as additional input for judges to consider during the selection process. NASA will announce the winning rover name in April 2009.

<http://marsrovername.jpl.nasa.gov>

Opportunity #16 - GLOBE Student Research Campaign on Climate Change

Planning for the GLOBE Student Research Campaign on Climate Change will occur over a 2-year period, beginning in January 2009, and will enlist the support of internationally renowned climate change scientists, science educators and educational outreach experts, as well as businesses, foundations and policy makers. Student research activities will commence in 2011, with final results of the campaign to be presented at an international student conference in 2013.

The Campaign goals are to: (a) involve over 1,000,000 students in climate change research; (b) enhance environmental and climate literacy for millions of people around the world; (c) empower students, teachers, and community members to take action on climate-related environmental issues; and (d) create a compelling model for 21st century environmental science education based on grade-level appropriate research and learning experiences.

The project is currently developing strategic collaborations to make this campaign a success. For more information, go to: <http://globe.gov/r/html/climatechange> or email: ClimateChangeCampaign@globe.gov.

Opportunity #17 - Darwin Day is February 12, 2009

Darwin Day is a global celebration of science, evolution and humanity on the birthday anniversary of Charles Darwin. The Darwin Day Celebration is now administered by the Institute for Humanist Studies. They are very excited because February 12, 2009 is the bicentenary of Darwin's birth. They will assist groups throughout the world with their plans and events to mark this day. Their staff has worked feverishly to redesign and upgrade the Darwin Day website and it's now live! Check it out: <http://darwinday.org> <<http://darwinday.org>>

Opportunity #18 - Inspiring Today's Students and Improving Tomorrow's Water

The Alaska Water Wastewater Management Association (AWWMA) will be hosting the Stockholm Junior Water Prize in Anchorage, June 25-29, 2009. The Stockholm Junior Water Prize is world's most prestigious youth award for a water-related science project. The prize taps into the unlimited potential of today's high school stu-

dents as they seek to address current and future water challenges.

Any high school student (grades 9-12) with a water project can “self-nominate” their project for the Stockholm Junior Water Prize competition by entering directly online at www.sjwp.org <<http://www.sjwp.org>> <<http://www.sjwp.org>> . Also, any student who enters a water-related project in any local or regional science fair are eligible. Projects may focus on local, regional, national, or global issues. It is essential that all projects use a research-oriented approach, which means they must use scientifically accepted methodologies for experimentation, monitoring, and reporting, including statistical analysis. Each year, more than 65,000 students from across the United States enter projects in local science fairs. Of those participants, all high school students with water-related projects are eligible to enter the state Stockholm Junior Water Prize competition.

Students enter by submitting their research papers online at www.sjwp.org <<http://www.sjwp.org>> <<http://www.sjwp.org>> and between April and May judges select one winning project from each state. State winners and their science teachers receive a free trip to the U.S. national competition, which takes place in a different city every year (Anchorage, AK 2009!). For more than a decade, the U.S. competition has continued to grow, and it is now an exciting three-day event. Students from nearly all 50 states come together each summer to display their research, take part in fun, educational activities, and just talk water.

The International Competition

The national winner and his or her science teacher represent the United States at the international competition. Held each August in Stockholm, Sweden, it is truly a royal affair. The competition takes place during World Water Week and is full of impressive events, culminating in an awards presentation by the Princess of Sweden. With participants from about 30 countries, the week-long event is as much a cultural experience as it is an educational one. It provides a once-in-a-lifetime opportunity for students to connect with other young researchers from around the world who, just like them, are meeting water challenges head on.

Nicole A. Duclos, Program Coordinator
Alaska Training/Technical Assistance Center (ATTAC)
University of Alaska SE Sitka Campus
Toll free in Alaska: (888) 750-3823 or (907) 747-7756
<http://www.uas.alaska.edu/attac>
<<http://www.uas.alaska.edu/attac>>

from NASA Earth and Space Science Education E-News December 2008

K-12 Teachers: Apply to Become a NASA Endeavor Fellow

Applications for the January 2009 cohort are due Dec. 5, 2008 (limited to in-service teachers).

Applications for the September 2009 cohort are due March 6, 2009 (open to in-service, alternative-route and pre-service teachers).

As part of NASA’s commitment to the effective preparation of K-12 science teachers, formal educators are invited to apply to become a NASA Endeavor Fellow. Each Fellow will be fully funded to complete a unique Online Certificate in Applied Science Education with Teachers College, Columbia University. The goal of the project is to ensure that teachers across the country can use the discoveries that NASA makes on a daily basis to inspire the next generation of explorers, engineers and astronauts.

Applicants from the following states are encouraged to apply for the first Endeavor Fellow cohort that begins in January 2009: Florida, Virginia, Maine and Texas. For more information and to apply, visit http://www.nasa.gov/audience/forstudents/postsecondary/programs/Endeavor_Science_Teaching_Certificate_Project.html.

Join NASA Online Student Community for Grades 9-12

Applications Due: Dec. 31, 2008

NASA’s INSPIRE project (Interdisciplinary National Science Project Incorporating Research and Education Experience) is accepting applications from students in grades 9-12 to join the INSPIRE online community. Students who are selected will:

- Participate in the INSPIRE Online Community.
- Learn about science, technology, engineering and mathematics, or STEM, fields of study and careers.
- Compete for unique summer experiences at a NASA facility.

For more information, including requirements and an online application, visit http://www.nasa.gov/audience/forstudents/postsecondary/programs/INSPIRE_Project.html.

Spectacular Conjunction

Nov. 24 - Venus and Jupiter are converging for a spectacular three-way conjunction with the crescent Moon, a rare gathering some astronomers are calling ‘the sky show of the year.’

http://science.nasa.gov/headlines/y2008/24nov_skyshow.htm?list1110881

NASA Satellites Capture images of Southern California Wildfires

Nov. 17 - Images from NASA satellites give a wider perspective of the full extent and devastation of the wildfires raging in Southern California.

http://www.nasa.gov/mission_pages/fires/main/usa/cal_fires_2008_1117.html

Space Explorers' Mission Patch Contest

Space Explorers' annual Mission Patch Contest deadline is fast approaching. Don't let your students miss out on this fun and rewarding contest! Please visit http://www.space-explorers.com/internal/common/announcement/2008_Patch_Contest.pdf for all the details.

All entries must be postmarked by Friday, December 12, 2008!

Contest winners will be notified by mail with a Certificate of Achievement in January 2009. The first place mission patch in each division will be made into an actual patch. The teacher will be sent 100 of these patches in March 2009. Winning submissions will also be showcased on the Space Explorers' website.

Submit entries via e-mail to elizabeth@space-explorers.com or mail entries to the following address:

Space Explorers, Inc.
c/o Elizabeth Schmeisser
1825 Nimitz Dr.
De Pere, WI 54115

If you are crunched for time, many teachers team teach by working with the students' art teachers when participating in this annual contest

<http://www.space-explorers.com>
